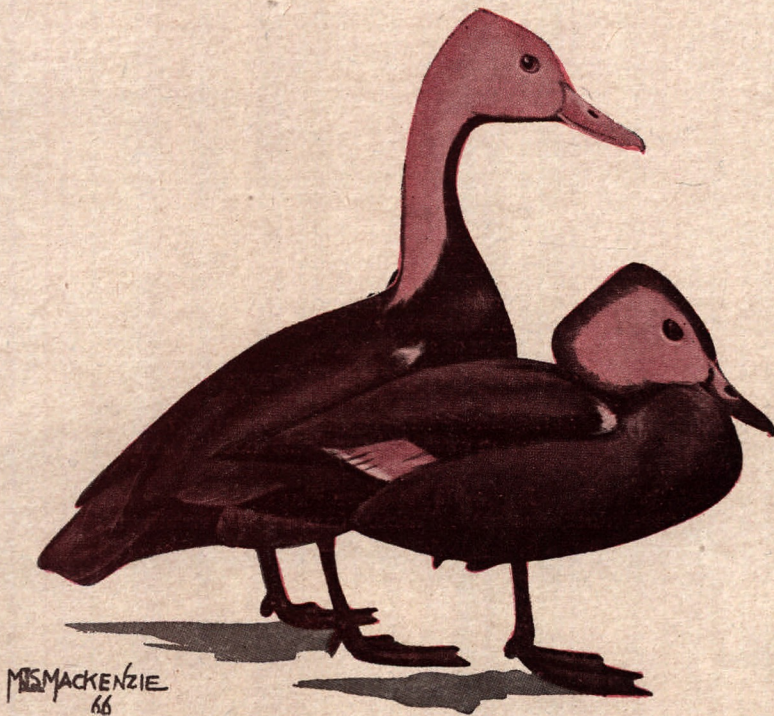




THE PINKHEADED DUCK

(For reference see Page No. 71)

CHEETAL



JOURNAL OF THE
Wild Life Preservation Society of India

Wild Life Preservation Society of India

I The aims and objects of the Society are as follows :

- (a) To promote interest in and impart knowledge regarding the preservation and conservation of all forms of wild life, particularly among the youth of the country.
- (b) To co-operate with the Govt. of India and States and with other Societies and Institutions having similar aims and objects in working for the interests of wild life.
- (c) To assist in enforcing and actively supporting the Forest Acts, Wild Birds and Animals Protection Acts and Rules etc. of States and the Indian Arms Act and Rules in so far as they pertain to wild life and to bring to the notice of the authorities any infringement of the same and to assist the detection and prosecution of offenders in respect of such laws.
- (d) To advise and help the Govt. and wild life administrators in the formation, maintenance and protection of Sanctuaries and National Parks, the preservation of wild life in general and rare species of India in particular and in the introduction of exotic species into the country, the rehabilitation of rare species etc. and in the revision on rational lines of the shooting and fishing rules, so as to conserve and increase wild life stocks.
- (e) To raise funds for the carrying out of the above aims and objects and to found and maintain museums, reading rooms and libraries of natural history in order to disseminate knowledge regarding wild life.
- (f) To promote sportsmanship in shikar and to recognise well regulated shooting and fishing, as a means of preserving wild life and fish so that through wise use the surplus may provide a recreational asset to the nation.
- (g) To carry out publicity and propaganda for the preservation of wild life in India by means of monographs, journals, bulletins, films, film strips and other feasible methods.
- (h) To assist members of the Society in obtaining shooting and fishing facilities and facilities for viewing and photographing wild life in India.
- (i) To conduct research into the problem of Wild Life management in India, and in pursuance of this, to initiate, encourage and, where possible, assist in projects for the study of threatened species and related subjects and to provide reference and research facilities for such work.
- (j) To carry on such other activities which will serve the above objectives.

What membership of Wild Life Preservation Society of India will entitle you to ?

1. You will become an active member of the growing number of Wild Life enthusiasts, who enjoy working for and spreading the knowledge of how to conserve India's heritage of Wild Life for posterity.
2. You will be entitled to the full use of the Library of the Wild Life Preservation Society and of its reading room.
3. You will receive a membership certificate.
4. You will receive a personal identification and membership card.
5. You will be entitled to buy all publications of the Society at a concession rate.
6. You will be entitled to buy at concession rates the Society's Greeting Cards, Calendars, Tie and the Balance of Nature Game (specially published in colour for its educative and recreational value).
7. You will be supplied "Cheetal", the half yearly journal of the Society free.

II. Executive Committee

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Malvendra of Nabha—Regional
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Wild Life Preservation Society of India

VOL. VIII

APRIL, 1966

No. 2

Ourselves

Our last Editorial spoke, with a sense of satisfaction and discontent simultaneously blended, of certain favourable trends discernible in the wild life scene in the States and at the Centre. This caused us some optimism, in keeping with our belief that the massive effort needed to make substantial contributions towards solving wild life problems in India would have to come from the Governments at the State and Central levels, though amateurs and amateur organisations might lend a stimulus.

This time, we are more concerned with our own organisation and its weaknesses. Some of these are inherent in the nature of the Society. It draws on a very limited fund of active and enthusiastic naturalists and sportsmen; for the greater part, most people are too busy with their narrow horizons to bother about either hobbies, or, even, less relevant branches of their professions.

Without being too introspective or philosophical, let us confess what ails us: We do not have a sufficiently high rate of induction of new members. Members keep on increasing in number, but this increase is eroded away by delinquents, and the resultant is just not satisfactory or swift enough. We make appeals, which yield limited results, and again lapse into a jog-trot of circumlocution and procrastination. On other fronts we advance, like recognition outside India, improvement in the scientific material of 'Cheetal' and even support from our own Government at both levels. And yet, the life blood of the Society must be the ordinary member. And these are not joining in sufficiently large numbers.

The drawback in our drive for new members must always be that we can offer but little materially to help our members in their pursuits connected with wild life. On the other hand, departmental agencies do that job much better. What we can do, and do, is to provide the necessary foundation and respectable 'intellectual' or 'technical' background for the seeming indulgence or cruel sports of wild life enthusiasm or 'shikar'. This is invaluable,

and once thoughtful people become members, they realise this truth. But how to get them to see it? Our appeals to present members to endeavour to induct at least one more member each, are our only hope, and we hope that this time this appeal will be more strikingly fruitful.

It is not that enthusiasm is lacking. It is, rather, that it needs to be focussed and canalised, and present members have the moral obligation, and the pleasant task, of making this possible, of giving a focus to the diffuse love of wild life and sport that is so much a part of the make-up and mentality of India.

Editorial Notes

From nineteen different cases reported in the English language newspapers of India during the last few months, one gathers the impression that incidence of man-eaters, rampaging tigers and other unwelcome manifestations of wild life in India, continues after the fashion of the nineteenth century, and is matched only by the number of gallant shikaris ready to volunteer their services for ridding the population of this menace.

A closer look, however, at these instances where 'shikaris' have eliminated man-eating tigers and other 'pests', reveals an entirely different truth.

How did these tigers become man-eaters? Not, it turns out, any longer through the Corbett-days-cause of porcupine quills imbedded in the nostril or fore-paw through an argument with that prickly rodent! Gun-shot wounds, and light-rifle rounds have been in most cases, the real cause of their transformation into pests.

To take some examples: The man-eater of Sarkaghat in Mandi claimed its fifth victim in July. A correspondent from Himachal writes to say that this tiger, one of the few to make itself evident in those westerly borders of the tiger's habitat, was one of a litter of three cubs, the parents of which were both shot earlier. A crop-protection gun-shot wound, to classify it tendentiously, was responsible, the correspondent adds, for the tiger turning to human quarry.

From Orissa comes another report. Six DBBL rifles have been presented to shikaris by the Government in Udayagiri Taluk of Ganjam District. One of these 'shikaris', a brave

young teacher of Chelaguda, however, described his encounter with two tigers, which he seems to have unchallengedly presumed to have been man-eaters, one of which fell to his muzzle loading shot-gun, the other one getting away, "wounded, I'm sure!"

There you have it.

If you want to know what happened to the other tiger, and dozens more like him, please read on!

A tiger was found dead, its carcase smelling high and rotten, and its skin decayed, in a cave in the forests of Koraput District. On investigation by a local 'shikari', three pieces of a quartered ball cartridge were found imbedded in the lung.

Bhopal, Jeypore and Kheri have all been reporting cases of cattle-lifting and man-eating by tigers. The thickly populated Uzanbazar area of Gauhati town was the scene of some panic when a tiger walked through and mauled two people. He was, of course, forthwith presumed a man-eater. He might well have been. But when carcasses of tigers began pouring in from the suburbs, it became less certain as to which was the man-eater.

Examples abound, but these should suffice to illustrate our best documented case-history: Naini Tal and Rudrapur area, with Dogadda as another neighbouring unit. Here, several tigers have established their man-eating reputations beyond dispute, and insight is available into the process whereby they turned man-eater through our conversations with some staff from the Pantnagar Agricultural University.

It seems the University's fields are subject to daily, or, rather, nightly, raiding by animals from the forest along its edge to the north and elsewhere. The fields, often with roads running along them, along the edge are a popular night-time route taken by various staff from the University, and animals are habitually shot, partly to protect the crops, often experimental crops, we gather, from animal depredation. These 'meat-animals', naturally, attract other than human depredation also, and panther and tiger are frequently seen along these tracks. These are shot at, often with the same weapons used for the herbivorous meat-animals, like shotguns and light rifles. The result is, inevitably, injury to carnivores which turns them man-eater, or leads them through hours of agony to inglorious death in some cave.

Once these tigers, wounded in night-shooting, turn man-eater, they become newspaper headlines, and the District Magistrate or other responsible official is approached for destroying them. He, naturally, gives priority to human life, and the tiger's life is forfeit. Rewards are announced for destroying the man-eaters.

The process continues further, for these rewards again attract some less scrupulous tiger-cullers and would-be shikaris, often resulting in further tigers turned into man-eaters.

The vicious circle must be broken, if we are to learn to live with our wild life. We can't break into this circle of nature, without becoming involved in this vicious circle. Let us, therefore, find other ways of protecting our crops than through night-shooting, and while these ways are being evolved, let us desist from firing at carnivores without adequate arms and proper methods in the daytime.

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Blackbuck for Malayasia:

Why not, indeed !

And, Bustard to the Kalahari, or the Sahara. Snow-leopard to the Alps; 'Thar' to New Zealand; Ibex to Australia; Ovis ammon to the Atlas mountains; Musk deer to the Pyrenees the process has endless possibilities. We can export a few of all and each of our 'threatened' species of wild life to various habitats of similar characteristics, where they might be made to take root; but their root within the native soil is not being nourished, inter-cultured nor even investigated.

Surely, it takes more effort to transplant a species into the jungles of Malayasia, than to protect it in the Mustard fields of Meerut and Gurgaon. Then why is it that we still can't get down to some sort of a programme investigating the present status of several of our most urgently 'threatened' species. The transplantation of exotica is one of the accepted ways of preserving it from extinction in its native habitat, as the salvation of the Orang outan has shown, but there must be other ways, too.

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Another Board Re-constituted:

It had already happened in U.P. and at the Centre, but in September, 1965, the State Wild Life Board in Assam was given new form and fresh vigour. Much wisdom and activity must have gone into the work, but we still disagree with the predominating folly of having vast, unwieldy Wild Life Boards. A Board cannot function as a unitary body, which should be the intention if it is to provide the top stimulus and guidance to the wild life effort in all its aspects of control and destruction and regulation, unless it has an entity; it must be small enough and compact enough to take decisions which can then be executed and implemented by the entire machinery of the State. The Assam Board, for example, consists of over thirty-five members, if we counted correctly.

We will look forward to signs of activity in the actual work of the field, rather than of the file.

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Fast Stories:

Report in the EASTERN TIMES, Cuttack, dated 24th March, 1965:

The Assam Cheetah is the fastest animal in the world, according to the Indian Wild Animals Board.

The Board's study reveals that the Cheetah can run at the speed of nearly 100 miles per hour. Next to the Assam animal is the African Tiger, which has a speed of 90 miles per hour".

Ignorant amateurs, we! We had not even heard of a special 'cheetah' from Assam which was still in the present tense. Nor did we know about special, or even ordinary, tigers from Africa. Evidently, we have been reading all the wrong papers our whole life through. For full and fresh, very fresh, facts about wild life, read, it would seem, the EASTERN TIMES!

The Importance of Sanctuaries (including National Parks) in the Conservation of Threatened Species of Large Mammals in South and South East Asia

BY

E.P. GEE

(Based on a paper read by the author at the Conference on Conservation of Nature and Natural Resources in Tropical South East Asia at Bangkok, Thailand, November 29 to December 4, 1965.)

Summary

Due to pressure from human population and ever insistent demands for more lands, sanctuaries in South and Southeast Asia are of inestimable importance for preserving rare and endangered species—especially the larger mammals. With poverty, hunger and often illiteracy as prevalent as they are, the main emphasis should be on the economic or tourist value of wild life. The co-operation and assistance of the local inhabitants are vital if any progress is to be made in nature conservation, and some practical methods of ensuring this co-operation are discussed, including buffer zones, publicity and education, and provision of local amenities.

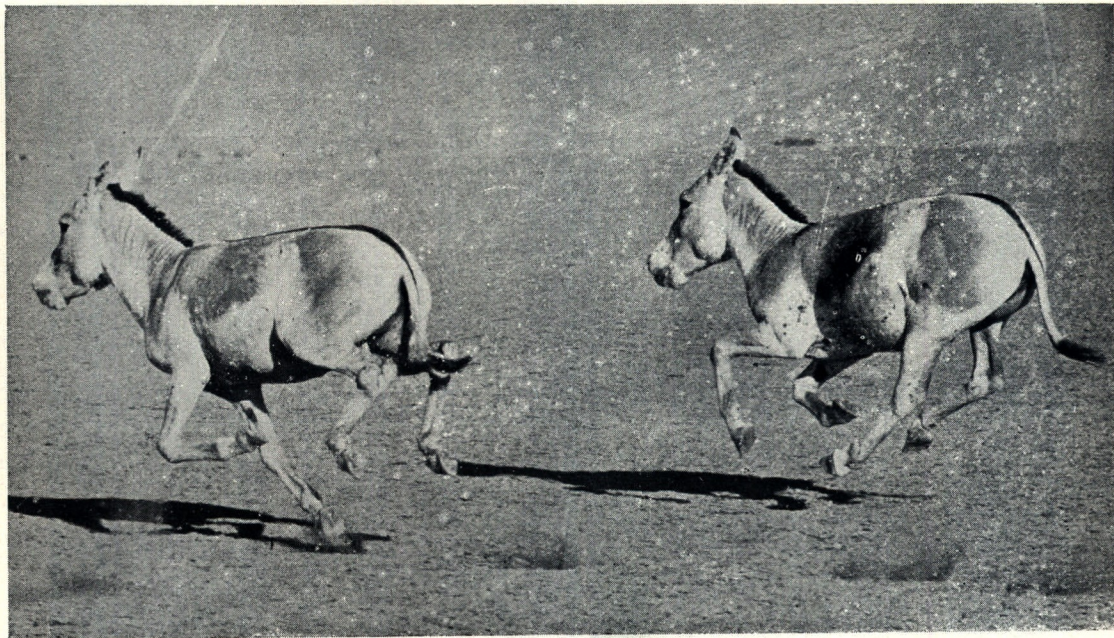
While legislation for giving total protection in all places to the larger endangered species is necessary, the difficulties of enforcing such legislation in emergent and developing countries makes it all the more imperative to preserve these rare species in sanctuaries. Sanctuaries, then, assume an even greater importance in developing countries—especially in those where there are pressing and ever increasing demands by a growing population for more land for opening up for grazing of domestic stock, for agriculture and for human settlement.

Such pressures from human population are generally much greater in Asian countries than in North America and Africa. Therefore sanctuaries in Asia are usually smaller in size and require more management and greater protection.

In South Asia, the preservation of the blackbuck and the great Indian bustard in the wide open cultivations and waste areas is a problem: can sanctuaries or national parks be created to save them? The Indian rhinoceros has so far been successfully preserved from extinction in Kaziranga, Jaldapara and other sanctuaries of Northeast India, but vigilance has to be maintained not only against poachers but also against intrusion by graziers, cul-



Intermediate or smaller egret at nest in Keoladeo Ghana Sanctuary, Rajasthan.



Indian wild asses on the Rann, Gujarat.



A herd of wild buffalo in Kaziranga Sanctuary.
(A couple of rhino, probably a pair, pass by unheeded.)



Brow-antlered deer, stag, hind and fawn from Manipur in the Calcutta Zoo.

tivators and others. The Gir Forest, stronghold of the Indian lion, greatly needs the status of a sanctuary or national park for its survival. Dachigam in Kashmir also needs to be given better protection and legal status, otherwise the rare and vanishing Kashmir stag may be lost for ever. The Manipur subspecies of the brow-antlered deer owes its precarious existence to the near impenetrability of the floating humus on its corner of the Logtak Lake; while the Burma subspecies, living on drier and undulating land, is believed to be somehow surviving in fair numbers.

In Southeast Asia, the Thailand subspecies of the brow-antlered deer needs rescuing from extinction either in a sanctuary or in some appropriate place where it can survive and breed successfully. The Ujung Kulon Reserve in Java appears to be in urgent need of more effective protection, if the Javan rhinoceros is to be saved from extinction. Sanctuaries need to be created for the Sumatran rhinoceros, to include the largest possible number of them in any known locality, or at any rate a large and suitable area in some place, where full protection can be more easily given, needs to be set aside into which this species could be transplanted. The anoa and the tamarau in Celebes and Phillipines are similarly in need of preservation, and the orangutans of Sumatra and Borneo require close attention. In a lesser degree of urgency, but soon to require protection, are the seladang, kouprey, Malayan tapir and others.

Where poverty, hunger and often illiteracy are prevalent among the local people, it is mostly of no avail to stress the importance of wild life and wild places on aesthetic, cultural and scientific grounds. The main emphasis should always be on their economic value; in other words it should be emphasised that rare wild animals are of infinitely greater value to the local villagers if kept alive in their natural habitat than if killed and eaten. Wild animals, especially rare ones, in their natural surroundings will attract visitors from nearby cities and tourists from abroad, and thus provide the necessary revenue and foreign exchange for the sorely needed development and elimination of the very poverty, hunger and illiteracy which everyone wants to remove.

The problems of preserving rare species of wild life in existing or proposed sanctuaries in South and Southeast Asia are mainly political and administrative, and only in a lesser degree are they scientific or ecological. The staff of the department concerned with protecting a sanctuary, whether it be the Forest or some other department, and the local civil authorities including the police, will find it extremely difficult to enforce laws unless these laws are carefully drawn up and unless the full co-operation of the local villagers is first obtained.

Drawing on experience gained at Kaziranga Sanctuary in Northeast India, where the great Indian rhinoceros is preserved, it has been found that the creation of a buffer zone around the sanctuary of varying width, in which no firearms or other weapons may be used or carried except by bonafide inhabitants of the zone for the actual protection of their own crops from vermin, has done a great deal to keep away poachers coming from outside. For anyone from outside caught inside the buffer zone with a firearm can be immediately arrested, while those living inside the buffer zone can be more carefully watched and controlled. Such a buffer zone can, if necessary, contain villages, cultivations, grazing grounds and so on as in the case of Kaziranga, though the ideal buffer zone would naturally be one devoid of such human activities.

To ensure the co-operation and assistance of the inhabitants living and working in the vicinity of a sanctuary, so that it will be easier for the authorities concerned to administer and protect the place and the wild life therein, the importance of publicity and education cannot be over-estimated. The monetary value of the wild life and of the wild place as a definite tourist attraction must be emphasised, for no hungry or impoverished person can consider an edible animal as something beautiful or scientifically interesting.

Under a democratic set-up, the local members of the legislature who live near a wild life sanctuary or national park must be convinced of the long-term economic advantages to the people of wild life resources, so that they may resist local demands for immediate short-term exploitation of these local resources. In other words, it is essential that the right kind of publicity be done in such a way that the local members of the legislature may themselves spread the gospel of nature conservation among their constituents.

Basically, and by the democratic way of thinking, animals belong to the people of the area in which they exist—to the local people, and could well be regarded by them as living money earners. As such the local inhabitants living on the fringe of a sanctuary should be the protectors of this valuable natural resource rather than the destroyers of it. It is significant that poachers of the rhinoceros in Kaziranga cannot operate on the edges of Kaziranga: they are forced to do their illegal killing secretly and in the remote interior, away from and unknown to the local inhabitants who would resist such interference from outsiders.

Local human populations adjacent to a rare species of wild life should be induced to take a pride in their accidental trusteeship, so that they could then proudly boast of being the sole custodians of the only survivors of that species in the world as has already happened in at least one place known to the writer.

In the event of a rare species having to be captured and transplanted to a new area more suitable for its supervision and protection, as might happen in the case of the Sumatran rhinoceros, it is even more important to enlist previously the support of the local population. In such a case the local villagers, being unaccustomed to the presence of a strange species which could be considered as usurping their land and which might cause damage to their crops, might resent such action being taken by the authorities—unless they have been previously carefully prepared for it. For instance the villagers round Kaziranga have been long accustomed to animals emerging from the sanctuary and eating their crops, and have come to realize that crop growing in the vicinity of a sanctuary is an occupational hazard which must be accepted with good grace. But to create new conditions of wild life as potential crop-raiders might arouse resentment in a new area—unless the inhabitants of the neighbourhood could be previously persuaded to accept the new situation with its land requirements and risks, in their own and in the national interests.

In order more easily to convince the people living in the vicinity of an old or a new sanctuary that wild life and wild places are revenue earners for the people of the country as a whole including themselves, it is suggested that there be some concrete, practical and useful proof of the fact that revenue is, in fact, coming in from the wild animals. There must be some proof that although a sanctuary is locally run at a financial loss, yet there is a profit from tourism in the country as a whole. Such proof can be given as follows: instead of all the revenue derived from tourism and wild life being lost in general country wide expenditure, at least some part of it should be allotted for special and extra development in the vicinity of the sanctuary from where some of it came. In other words a special school, a special clubhouse, a special drinking water supply or suchlike construction in the neighbourhood of a sanctuary, in addition to the normal development work which is going on in the district, publicly proclaimed as being the result of funds derived from the rare species or sanctuary concerned, should create a very favourable impression on the local people.

It is on the co-operation of the local villagers that many of the endangered species and their sanctuaries depend, and it is mainly by such simple and practical methods that underdeveloped peoples can be persuaded to become conservation-minded.

For the Wildfowler—IV

By

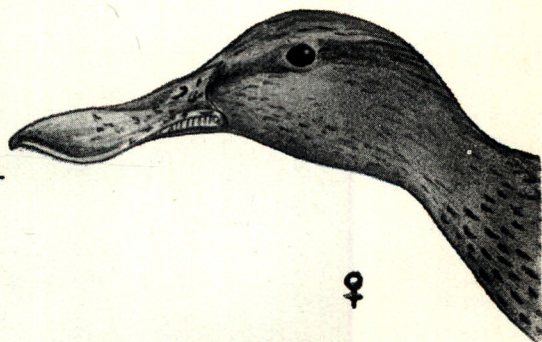
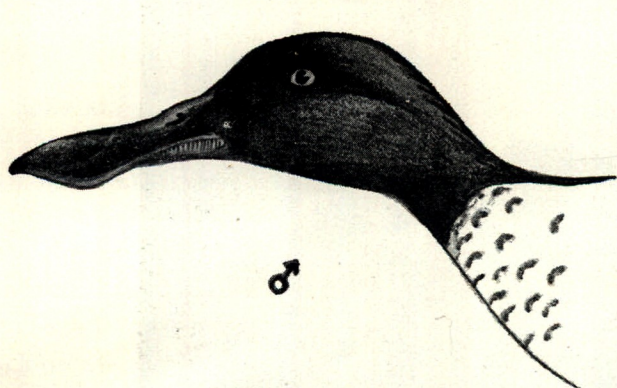
J.M.S. MACKENZIE

Blue-winged Ducks.

Whilst reading a number of articles about India recently I couldn't help noticing the name Blue-winged teal and Green-winged teal being used frequently. On asking a number of persons I knew to be interested in wildfowling I discovered a certain amount of confusion when these terms were used in conjunction with the name Garganey. I was also staggered to find quite a number of people still call a female White-eyed pochard a Red-eyed or Common pochard because its eye is brown and not white. Consequently I would like at least to clarify the differences and characteristics between Common teal (European Green-winged teal), Garganey and the Blue-winged teal of America.

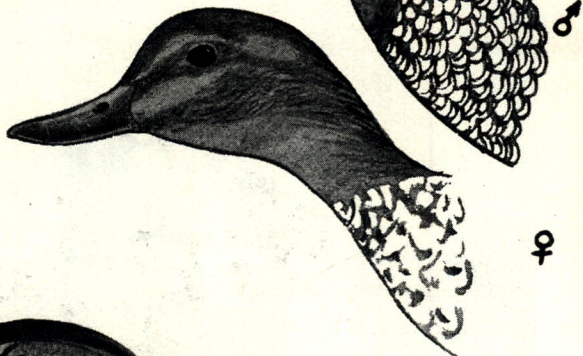
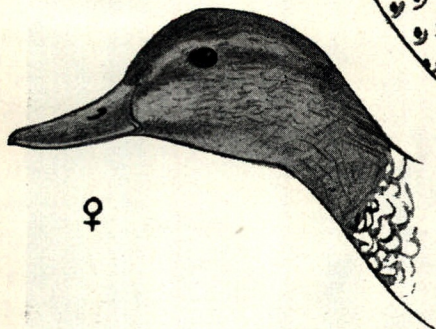
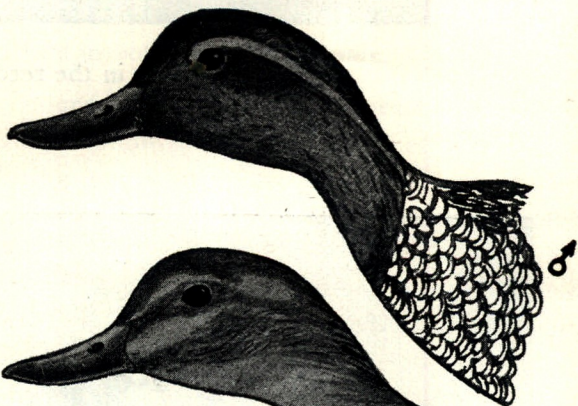
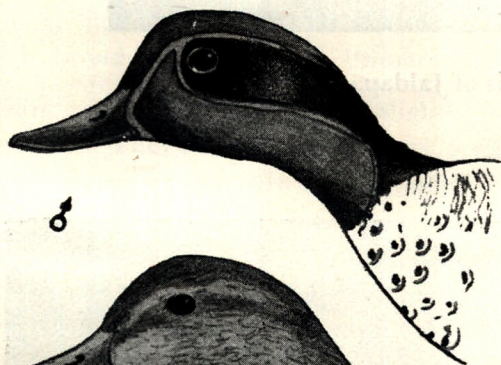
The Common teal (*Anas crecca crecca*) is probably known by all wildfowlers in India; a small very swift little duck frequenting ponds, marshes and streams, often gathering into large flocks when feeding or resting. The drake is a fine example of nature's play with colour with his bright chestnut head and neck, black chin and short nuchal crest, a broad metallic green band from eye to nape, bordered with a narrow cream-yellow line which is prolonged down to the base of the bill. The female is rather ordinary looking speckled brown duck; small but much like many other female ducks except the wing speculum which is similar to that of the drake being black for the outside six feathers and metallic green for the remainder, a broad cream-white line above and a thin white line below; the remaining wing being a uniform brown.

The Garganey (*Anas querquedula*) although about the same size as the Common teal, a little larger actually, is in fact much more closely related to the Shoveler than the Common teal being one of the seven species of Blue-winged ducks which all have blue grey lesser and median wing coverts and no black in the speculum as the Common teal. In young birds this grey isn't always very evident, especially among the female, but the coverts are always fringed with grey producing a broken effect. The edges of the feathers within the speculum of the female are fringed with white, quite unlike any other duck. Another pointer is that all Blue-winged duck have white ribs to their primary feathers whereas Common teal do not.

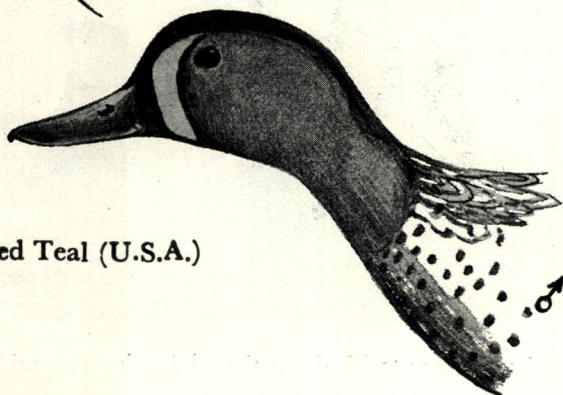


Common Shoveler (India).

Garganey (India).



Blue-winged Teal (U.S.A.)





A rhino in the reeds of Jaldapara.



The elephants Phulmanti and Lucky Prasad Jaldapara.

The Male Garganey in breeding plumage, which he assumes very late, has a black crown and throat, long white supercilia from above the eye joining at the nape. The rest of the head and neck is brownish chestnut streaked with white specks; mantle back and tail blackish brown with pale borders to the feathers. Wings generally as in others of this group but with long ornamental scapulars glossy black with a broad central white line; wing coverts pale bluish grey and the speculum a light green between two wide white bands. Breast light brown looped with black and the rest of the underparts white finally waved with black on the sides and spotted on vent and undertail coverts. Eyes brown, bill and legs grey.

The female is dark brown above, with light borders to the feathers and almost pure white underneath. The upper breast brown spotted, the sides and vent with elongated brown spots. The distinguishing features when comparing with the Common teal are the greyish brown wing coverts, olive brown speculum with white borders, and the conspicuous white eyebrows and throat. The male in eclipse is much like the female, but the wings remain as in the breeding male, i.e. (pale blue-grey coverts and pale green speculum between broad white bands). Primary ribs white in both male and female.

Garganey, although having a slightly broadened bill are the least specialized duck of their group. They are quiet little birds, preferring shallow ponds and marshes with plenty of cover. They conjugate in large numbers during the winter especially in India and tend to pack more than other duck on water and in flight. The flight is rapid but seldom turning or plunging down-wards suddenly as common teal like to do but they twist about a great deal especially when frightened. Garganey are far more common in the west of India than the east and are seldom seen in more than two's or three's in Assam often mingled with Common teal or Gadwall, sometimes Shoveler,

At this point I would like to describe the **Blue-winged teal of N. America** (*Anas discors*) to show the variation with the Garganey. The male has crown, anterior part of the head and throat black, with a broad crescent shaped white band on the face in front and over the eye, reaching down to the throat, a little like a drake Shoveler emerging from eclipse or the N.Z. Shoveler. The rest of the head and neck dark grey with purplish pink reflections; back greenish grey, wing coverts light blue, speculum shiny green with the white bar above broad and the lower one very narrow, almost absent; under parts reddish brown profusely spotted with black. In fact quite different from the Garganey drake.

The female does in fact resemble the Garganey but is more diffusely and darkly marked on the sides and darker on the underside; the wing coverts are blue, not dull brown-grey, and the bill broader.

The main point I wish to make here is that the Blue-winged Teal—the biological replacement of the Garganey in the New World, is a different species and, therefore, the name should be avoided when referring to Garganey in India.

The second of the Blue-winged duck to be found in India is the **Common Shoveler** (*Anas clypeata*) which I am sure needs very little description because of its massive bill. The male has a black green head, white chest, and rich chestnut body and underside, black back and under coverts with a white tail and bright orange legs. Eyes yellow. Males in eclipse and the females brown buff, the black beak of the drake becomes brown at this stage. The female eye is brown which makes it very easy to determine the sex between eclipse males and females in the hand. One point I would like to mention is the noisy flight of the Shoveler specially when leaving the water. This often enables one to recognise this species even in poor light or when they are rising through thick cover. Like the Garganey they are strong on the wing but being rather grubby feeders do not compare as game birds. Both these species of Blue-winged duck can be kept in captivity but the Garganey I have found is like the Common teal and finds it hard to settle down with people nearby, so tends to remain out of sight most of the time. On the other hand the Shoveler settles easily and the drakes are most decorative but their feeding water must be kept high in animal matter for them to do at all well.

The Status of the Big Game Species in the Keoladeo Ghana Sanctuary, Rajasthan

By

GEORGE B. SCHALLER AND J. JUAN SPILLETT

Keoladeo Ghana is known as one of the finest waterbird sanctuaries in India. However, it is not generally appreciated that this reserve also harbours such typically Indian big game species as the blackbuck, nilgai and cheetal, in addition to sambar, hog-deer, leopard, and others. For example, the booklet describing the sanctuary (*Keoladeo Ghana, Bharatpur*, published by the Bombay Natural History Society) devotes only one sentence to the mammals. If properly advertised, these could become a major attraction to the numerous tourists that visit Agra only 30 miles away.

Presently India's wild life continues to decline unabated. It appears that some species like the blackbuck may be able to survive only in rigidly protected sanctuaries. Therefore, a knowledge of the status of the wild life in each reserve is urgently needed. Adequate conservation practices can be based only on a body of precise facts which have been collected and analyzed continuously over a period of years. In order to obtain some data on the condition of the big game, particularly the ungulates or hoofed animals, in the Keoladeo Ghana Sanctuary, we censused their numbers between February 12 and 16, 1965 and the senior author remained until February 23 to obtain additional information.

The Sanctuary is composed of 7,000 acres of marsh and open woodland completely surrounded by cultivation near the town of Bharatpur. It was once the private shooting preserve of the Maharaja of Bharatpur, but after independence the forest department assumed management of the area. A shallow, marshy lake broken by numerous reed beds, patches of higher ground, and earthen dams or dikes covers about 2,000 acres in the center of the sanctuary. A forest of *Atacia arabica*, *Prosopis spicigera*, *Zyzyphus* sp. and other thorny shrubs and trees, characteristic of this semi-desert region, extends on three sides from the marsh to the reserve boundaries. The eastern side consists in part of grassland.

Census method. We transected the entire sanctuary on foot, walking in parallel lines from 150 to 300 feet apart, depending on the density of the undergrowth. The ungulates that flushed along our route of travel were counted. Transects were run only between 09:00 and 15:00 hours, a time of day when the wild life was resting and not inclined to move far when disturbed. Although our transect method was relatively crude, it provided sufficient accuracy under the prevailing conditions. For example, nearly all the blackbuck in the sanctuary were in one large herd and most of the cheetal had congregated into several large herds, which confined themselves to two specific areas. This enabled us to count all or most of these two species on the same day without duplication. Nilgai were readily tallied because of their large size and the open forest or "parklike" areas which they frequented. Any duplication in our counts of nilgai was offset by the few animals we may have overlooked. Our transect data were generally confirmed by other visits on foot and by car to various parts of the sanctuary.

Results. Our estimates of the various species is presented in Table I. Cheetal are by far the most abundant wild ungulates in the sanctuary. We counted about 360, but, since it is likely that a few were overlooked, we estimate a total population of 375-400. Our count of nilgai was about 110 and we believe this figure to be quite accurate. The blackbuck were counted several times and the figure of 70 was our highest total, although one or two small fawns hiding in the grass may have been overlooked. We saw nine, or possibly eleven,

different sambar, but it is doubtful that we tallied all of these shy deer. The hog-deer is so rare that the sanctuary staff appeared unaware of its presence. We observed single males on two occasions. According to the files of the forest department, numerous wild pigs died of disease in May, 1964. They are presently few in number. We counted a total of six pigs on four occasions, but the tendency of these animals to remain hidden until closely approached makes an accurate census difficult by our method.

We found only one fresh track of an adult leopard, and a large cub has been recently seen by others. It is doubtful that more than two or three leopards survive in the area. The sanctuary also contains an undetermined number of hyaenas, jackals, porcupines, hares and other smaller mammals.

Conservation problems; The abundance and variety of birds and mammals, the easy visibility of the wild life, the accessibility of the sanctuary throughout the year and its proximity to major tourist centers, all combine to make Keoladeo Ghana unique among India's reserves. We were, therefore, distressed to note several problems which so adversely affect the sanctuary as to cause grave concern for its future.

Table 1

The number of wild ungulates in the Keoladeo Ghana Sanctuary

Common name	Scientific name	Estimate of numbers
Cheetal or Spotted deer	<i>Axis axis</i>	375-400
Para or Hog-deer	<i>Axis porrinus</i>	fewer than 20
Sambar	<i>Cervus unicolor</i>	fewer than 20
Blackbuck or Indian antelope	<i>Antilope cervicapra</i>	70
Nilgai or bluebull	<i>Boselaphus tragocamelus</i>	100-120
Wild pig	<i>Sus scrofa</i>	fewer than 40

Livestock grazing: Because grazing areas are not available in the heavily cultivated vicinity of Bharatpur, most of the livestock in the area is driven daily into the sanctuary to graze. During the fiscal year 1963-64 a total of 4,016 buffaloes and 1,640 cattle were permitted to graze in the sanctuary for a fee. The area thus supported 5,656 cattle and buffalo or one

domestic animal per 1.2 acres (including the marsh where many buffalo feed). This high density and the resultant overgrazing has severely damaged the vegetation. In some areas, particularly the eastern and northern parts, the grass cover has been almost completely removed, leaving only bare sandy soil or, at best, a few unpalatable weeds. In most other parts of the sanctuary the grass has either been cropped to ground level or consists of coarse bunch grasses not favoured by livestock or wild life. The carrying capacity of the area is obviously far exceeded by livestock alone, not even considering the wild ungulates. Cheetal, blackbuck, and other game species are by preference grazers like the domestic animals. Therefore, severe competition exists between the two for forage. The sanctuary presently contains only about one wild ungulate per 7.5 acres, (excluding the marsh) or one wild ungulate per 8 or 9 head of domestic livestock. It is unlikely, therefore, that wildlife can be appreciably increased until competition by livestock has been substantially reduced. If cattle and buffalo are permitted to remain at their present numbers, the range will ultimately, and perhaps within the period of only a few years, deteriorate to a level where it can support only a small fraction of animals, both domestic and wild, now grazing there.

Predation: Although leopards, feral dogs, and perhaps jackals and hyaenas kill a certain amount of wild life each year, man appears to be the major predator in the area.

The Maharaja of Bharatpur and his guests have shooting rights in the sanctuary. Poaching by villagers, apparently for cheetal, is a serious problem in the sanctuary. We saw two men with a muzzle loader, and on several occasions in the early morning heard shots nearby.

General human disturbances: Human activity in the sanctuary is excessive. In addition to villagers tending livestock and poaching, there are people gathering berries, digging and removing grass from the reserve, collecting firewood, repairing roads, and so forth. As a result the wild life is almost constantly disturbed and its normal activity patterns are continuously disrupted. Some of this human activity also has an adverse effect on the vegetation. For example, although the forest department has licensed only 36 wood collectors to remove dead wood from the reserve, we have seen as many as 15 illegal loads of wood leaving the sanctuary in one evening. Wood collectors were also observed to break down growing trees for firewood.

Recommendations: To prevent further deterioration of the area and to insure its perpetuation, we would like to make the following proposals:

1. That the sanctuary be given the legal status of a national park.

2. That the number of cattle and buffalo be immediately reduced to a maximum of about 1,200 head, or roughly one animal per 6 acres. Each village should be given a definite grazing quota and assigned to specific grazing areas. Periodic checks should be made to insure that these quotas are not exceeded.
3. That certain parts of the sanctuary be exclusively reserved for wild life and remain closed to all livestock.
4. That the fence surrounding the sanctuary be repaired to stop the illegal entry of livestock and to prevent the wildlife from moving into the cultivated areas surrounding it.
5. That all "so-called" crop protection guns be confiscated from the villages bordering the sanctuary.
6. That patrols of forest department personnel walk through the sanctuary at dawn and dusk to reduce poaching and other illegal activities.
7. That no villager be permitted to leave the main road in the sanctuary unless licensed for a particular task such as herding cattle or collecting wood.

The problems of Keoladeo Ghana also confront the other sanctuaries of India to a greater or lesser degree. However, thus far relatively little has been done to hinder the poacher from decimating India's wild life and to prevent the ever-increasing herds of livestock from turning forests into deserts. The task of preserving a remnant of the unique fauna of this country lies with the present generation. It should constantly be remembered that the sanctuaries of India with all of the wild animals and plants which they contain are irreplaceable and as much a part of the nation's heritage as the Taj Mahal and the ruins of Khajuraho. Unfortunately this heritage is rapidly being destroyed through apathy, false sentiment, and political expediency.

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The Need of Forests and Nature Reserves

By

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A substantial forest is an imperative feature of a country's economy. A single glance of the luxuriant vegetation involuntarily provokes the sensation of prosperity. In early days when man led some sort of communal life, the vast forest, that had its essential uses, was considered a nuisance. It concealed his human and other enemies. It had good soil to raise his crops. His cattle herds often strayed and disappeared in the jungle. Therefore by axe and fire he felled and cleared the jungle and grew his crops. When the soil became barren he cut and cleared a new piece of jungle and started again. This wasteful practice of shifting cultivation still prevails in some countries. At that early stage, with a small population it did not matter. The forest was vast and lasting. There was enough land and timber for all to meet their simple domestic needs. But after the two great world wars of 1914-1918 and 1939-1945 with the rapid rise of population and a high standard of life the demand for land for food cultivation, river valley projects, rehabilitation of displaced persons in forest areas and setting up big industrial projects by removal of forests, the need for more timber for house and ship building and huge quantities of fuel and charcoal all combined together created an imbalance in land use. Many countries including India wasted their natural resources, cut the verdant forest and woefully wasted vast timber resources, overgrazed pastures, pillaged wild life, tore the cover from the fertile soil, speeded up the rate of soil erosion, caused weather to be more inclement and floods to take a heavy toll of men, homesteads, cattle and soils and destroyed nature. Travel by land and air shows the barrenness of much of the hilly and upland country and the sparseness of the vegetation where it still clings under conditions of maltreatment.

To-day due to the technological advances in using wood on a large scale in new forms, such as sawn sizes, plywood, pencils, fibre board, particle board and cartons, the growing demand for pulp and paper, due to large circulation of news papers, magazines and books and the allied development of new machines and high labour costs many countries are planning their industrial and domestic future and how to conserve their timber supplies or increase in relation to the known potential world availability. The working plans have got to look

decades ahead and estimate with the changes in demand for they affect the forest management vitally.

Forests are necessary to keep up a steady and well balanced rural employment and with this in view they are to be managed as an economic productive industry. At times of a war, especially nuclear war, causing wholesale destruction of towns and cities, there will be a tremendous demand for timber for shoring up, bridging, telecommunication, temporary buildings and furniture or even for fuel. A sustained forest industry with not only the raw materials available but also the skilled men and the haulage tackle to convey those materials into the devastated area would be very valuable.

To develop the forest resources, of late, there is the demand to change the system of forestry. One school of silviculture favours uneven-aged forests of mixed species, with as much reliance as possible on natural regeneration and a second school of silviculture prefers even-aged forests, with a single main tree species (monoculture) in each major block or unit and the use of clearfelling and replanting as a normal technique. The advocates of mixed uneven-aged forests do claim much advantage in soil protection, improvement and use, and lesser risks from pests, wind and rain damages. The advocates of pure even-aged forests assert that if species are used only in suitable climates and on suitable sites and provided adequate attention is bestowed to soil maintenance and its fertility and precautions against pests, fire, wind and rain damages, the advantages of uniformity in the material produced in simple and cheaper management and harvested by recourse to mechanization to avoid costly labour, in the use of seed of superior strains and exotic species both broad-leaved and certain conifers far outweigh any disadvantages and dangers. Any way, there happens to be a striking change in the aims of forestry and silviculture. Techniques of raising woods of fast growing species, forest management, new planting programmes and creation of even-aged stands are being standardised in many countries. Experience of afforestation on grass-land and degraded and eroded forest areas has shown that it can be done best by modification of site and use of exotic species. It is essential, at the outset to determine the environmental factors and their changes in relation to different species as accurately and specifically as possible as new forests develop, to ensure that the stresses between environment and forests do not develop unduly in trying to achieve the desired objects.

The area under forests in India is 302,688 sq. miles constituting only 24% of the total geographical area of 1,259,982 sq. miles. The per capita forest area is only 0.54 acre. The National Forest Policy (1952) lays down that "India as a whole should aim at maintaining one-third of its land under forests". Recently, the lands potentially fit for the purpose are

added to the existing forest areas so as to make up for the deficiency. Many forest areas are brought under the Working Plans.

Under the Five-Year Plans in India huge planting schemes and schemes of rehabilitation of degraded forests and of afforesting waste, gullied, ravined or otherwise ruined lands are in hand to meet the very great needs for wood and pulps of all kinds. Some of the great and valuable Natural forests containing Teak, *Pterocarpus marsupium*, *Dalbergia latifolia*, *Terminalias*, *Dipterocarpaceae*, etc., predominantly are also being conserved and improved and supplemented by planting. The silvicultural systems adopted vary from selection to clearfelling and planting. A great stride is taken to grow fast growing trees such as *Eucalyptus*, *Poplars* and some *Conifers*, besides the traditionally slow growing indigenous species such as Teak, *Dalbergia latifolia* and soft woods. The industrialists want to invest their money in the manufacture of sawn sizes, plywood, pulp, paper, particle board, chipboard and rayon if long term supplies of raw materials are assured to them. The planning to ensure the distribution of these new industries in the correct locations with reference to the supply of raw material and the scale of production, distance from forests, rail heads and the size of prospective markets and price trends at home and abroad is the real problem in many states.

Apart from the primary function of growing wood and supplying raw materials to the various wood-based industries, forests have the vital role, especially on mountains and uplands, in relation to water supplies, erosion, floods, shelter for farm animals, recreation, scenery and wild life. Protection and productive forests should be clearly distinguished and demarcated and correct data maintained.

In India and some other countries there is the urgent need of Nature Reserves or National Parks for the benefit of the people. The people must preserve for themselves and for posterity some primeval beauty that transcends even what their eyes can see and enjoy. The Nature Reserves are to be designed for preservation without altering their wilderness character. They include a scene of unique natural interest and beauty; an area far away from the sight, sound and fumes of civilization; an exclusive spot where one can feel free from modern civilization; a place where one can experience a feeling of adventure; a condition where full enjoyment depends upon one's own perception physical skill and self reliance. The forests, the native wild-life, the natural or historic objects or monuments contained therein, the plants which mantle hills and dales, the towering Teak and green grass are all protected. There is no logging or mining. Their meadows are free from cattle grazing.

One who knows the tangled skein from which all things come and observes the wind-blown tiny speck of seed growing into a massive tree 350 feet tall; the regularity of distribution of leaves on the stem to catch the sunshine; the miracles that the leaf performs when it manufactures chlorophyll and prepares its own food (energy rich carbohydrate, sugar and cellulose) in a process called photosynthesis in the tiny bodies chloroplasts contained in the chlorophyll by absorbing the radiant energy of sunlight from above and carbene-di-oxide from below and water from the ground via the tree and initiating a series of chemical changes; the cellular anatomy of the tree; the ascent of nutrient sap from roots which probe as much as 40 feet under the ground to a great height through the stem to the leaf and from the leaf to the root; the evaporation of water through its leaves by a complex system of transpiration which involves at least five different processes; the annual girth increment the tree puts on through the paper-thin tissue of cambium cells which divide and the new cells on the inside from xylem or wood, while the outer ones become phloem (outer bark); stimulation and control of plant growth; plant ecology and plant interrelations ranging from symbiosis to lethal parasitism, ultimately knows life in its new dimensions and sheds off fear. Then he knows the joy of being close to the earth, of walking in its forests unafraid, and being on familiar terms with its life. The grandeur of mountains and valleys, distant peaks and meadows lush with grass, glistening lakes and streams, the sound of wind and water, the panorama of clouds and the colours of sunrise and sunset and moonrise, the twinkling stars, the pageant of fireflies and the colourful flowers, the song of birds at dawn in a forest, the wonders of mushrooms, ferns and orchids all exhibit their beauty, inspiration and spiritual value. By the way, it is good that our school children are taught "Tree planting" but it would be better still to tell them that by injuring the tree-bark they destroy wonderful "Nature's monuments".

There are over 500 different species of mammals in India and some 2,061 varied species and sub-species of birds of which over 350 are winter visitors from the North. Birds and bees pollinating flowers; Ducks, Teals and Storks flying during their migration; the Pea-fowl and jungle-fowl flapping up into the trees; the tall White Storks (*Ciconia ciconia*) soaring and circling on thermal currents high up in the air; the long-legged and long-necked and pink-billed rosy white Flamingos (*Phoenicopterus roseus*) gathered in thousands in their nesting ground in the Great Rann of Cutch; the gay black-faced Langurs (*Semnopithecus entellus*) racing about the tree tops; the reddish-grey Indian Wild Ass (*Equus hemionus khur*) wading freely from one grassy island to another in the Little Rann of Cutch; the Spotted deer (*Axis axis*) bearing three-tined graceful antlers (31"-34") sniffing the morning air in the jungle; the Brow-antlered deer or thamin (*Cervus (Panolia) eldielidi*) of Manipur valley with

dark brown coat and handsome, almost circular antlers (35"-42") set in the head at right angles to the pedicel, moving about in small herds in a floating swamp; the Swamp deer or Barasingha (*Cervus duvaucelli*) of the Terai and the Sunderbans with splayed hoofs and larger skull and antlers (30"-41") bearing 10 to 14 points, in huge herds feeding till late in the morning and when alarmed the entire herd setting up a shrill baying cry; the Indian Sambhar (*Rusa unicolor*) with stout and rugged three-tined antlers (30" and above in the male) and yellowish-grey coat, moving amazingly silently through dense jungles or fleeing fast; the Kashmir Stag or Hangal (*Cervus elaphus hanglu*) with light brown coat and fine spreading antlers (40" and above) with points 10 to 12 wintering at about 5,000 ft. in the densely wooded mountain slopes to the North of the valley of Kashmir, but climbing up to between 9,000 and 13,000 ft. during the summer; the Musk deer (*Moschus moschiferus*) with a dark brown coat speckled with grey and without horns and face glands but the male having an abdominal musk pod containing usually an ounce of musk, exhibiting its curiosity and love of flute music of the shepherd in the Himalayan meadows—8000 ft. (Kashmir and Himachal Pradesh); the Nilgai or Blue Bull (*Boselaphus Tragocamelus*) the largest Antelope of Asia with high withers and lower rump, dark mane and short cone-like horns (8"-11 $\frac{3}{4}$ ") grazing and browsing in the sparsely clad hill forests of Peninsular India and resorting to the same spot to deposit its droppings; the Indian Antelope or Black buck (*Antelope carvicapra*) the sole representative in India of the genus Antelope, with its beautiful spiraled horns (16"-20")—(female seldom horned) in herds of 20 or 30 grazing till near noon and resting during the hot hours of the day in the Indian plains except the Malabar coast; the Four-horned Antelope or Chowsingha (*Tetracerus quadricornis*) dull brown in colour moving about with his hornless doe in a herd of 10 to 20 in the sparsely wooded hill country; the Nilgiri Tahr (*Hemitragus hylocrius*) a wild goat, with stout, wrinkled curved horns (17 $\frac{1}{2}$ " in the male and 14" in the doe) and sleek yellowish brown coat, grazing in flocks of 6 or more in the grassy upland downs of the Nilgiris and the Annamalais (4,000 to 5,000 ft.); the reddish-brown coloured Himalayan Tahr (*Hemitragus jemlahicus*) a wild goat with a well-built body covered with flowing hair, finely formed head with short close-set horns (12"-15") curved backwards, grazing in the open clearing on towering cliffs (10,000 to 12,000 ft.) in the Himalayas from Pir Panjal to Sikkim; the Himalayan or Asiatic Ibex (*Capra ibex sibirica*) a sturdy goat of yellowish hue with big scimitar like knobbed horns, (40"-45") the male bearded, in herds of 12 to 40, grazing in the morning on precipitous cliffs and ridges (12,000 to 15,000 ft.) of the Western Himalayas; the Markhor (*Capra falconeri*), the king of the wild goats with a reddish-brown coat, magnificent, diverged, spiraled horns (record 65" measurement) long, flowing beard, agile like Ibex, standing sentinel on the top of the mountain ranges of Nanga Parbat in Kashmir; the Bharal or Blue sheep (*Pseudois nayaur*)—bearing

characteristics intermediate between the sheep and goats—with brownish-grey coat suffused with slaty blue, round smooth horn (23"-24") curved backwards over the neck, in flocks of 10 to 40, feeding and resting at higher altitudes up to 16,000 ft. in the main Himalayan Range, numerous on the Northern slopes than on the Southern; the urial or shapu (*Ovis orientalis*) a handsome sheep of rufous grey or fawn colour, the ram with a great black or grizzled ruff on the chin and big horns (20"-30") strongly wrinkled, close-set and curved round in a circular sweep, in herds of 7 to 25, inhabiting steep grassy hill slopes above forests in Punjab, Kashmir, Gilgit, Astor, Ladak and Sind; the Nayan or great Tibetan Sheep (*Ovis ammon hodgsoni*), light brown in colour and the ram with a white ruff and massive curling horns (36"-40"), wandering on the crest of the Zasker Range in Ladak (15,000 ft.) in summer; the grey Himalayan Goral (*Naemorhedus goral goral*) a coarse-haired, stocky goat-antelope with short insignificant horns in flocks of 4 to 8 feeding on rugged grassy hill sides of Kashmir and Kumaon (8,000 to 9,000 ft.); the Himalayan Serow (*Capricornis sumatraensis*) an ungainly animal with large head and ears, short, massive horns (9"-10"), blackish grey-roan coat, short limbs with widely splayed hoofs in the Himalayas to the South of the main axis at an altitude of 6,000 to 10,000 ft. dashing away with a hissing snort; the Brown Bear (*Ursus arctos*) of the Central Himalayas (10,000 ft.) which is followed by crows to settle on the spot where it has rooted; the Himalayan Black Bear (*Selenarctos thibetanus*), the most carnivorous of bears killing sheep and goats and in summer picking wild fruits and berries in Kashmir and the Himalayas (10,000 to 12,000 ft.); the Sloth Bear (*Melursus ursinus*) of the forested tracts of India with a whitish V-shaped breast patch, carrying her cubs on her back to and from her feeding grounds; a Tiger (*Panthera tigris*) loping leasurably nearby; a prowling Panther (*Panthera pardus*); a yawning Asiatic Lion (*Panthera leo persica*) displaying his big fangs, impressive mane, massive chest and muscular thighs in the midst of his reposing pride under the bushes on the river bank in Gir forest; a clouded Leopard (*Neofelis nebulosa*) with its light yellowish brown coat plentifully marked with black in leaf-like patterns in attractive fashion, after a prey; the Civet marking his territory by leaving traces of a pomade substance secreted by glands and stored in pouches beneath the base of his tail on various tree trunks and boulders; the striped Hyena (*Hyaena hyaena*) with its massive molars capable of chewing bones; the porcupine (*Hystrix leucura*), the largest rodent with its formidable rattling quills that comes out at night in search of food; the Malabar squirrel (*Ratufa indica*) the loveliest of the rodent family, beautifully coloured in mahogany, black and old gold, with its tail trailing behind; the wild Dog (*Cuon alpinus*) one of the most ruthless of Nature's hunters; the scaly Ant-eater or Pangolin (*Manis crassicaudata*) with a coat of overlapping scales, ripping open a nest of ants with its curved claws of its front feet; the Indian Bison

(*Bos gaurus*) with massive horns (30" and above) dark brown coat and white 'Stockings' and small and close-knit hoofs, grazing or resting on long grass on a look out that commands all views; the formidable Indian slaty black Wild Buffalo (*Bubalus*) with large head, small ears and longer horns (record horn measurement 77 $\frac{3}{8}$ inches) and large, wide splayed hoofs, concealed in tall grass; the great Indian one-horned Rhinoceros (*Rhinoceros unicornis*) of massive build, boat shaped head with a lance like horn (15"-16") and heavy hide with deep folds on the shoulders and thighs, wallowing in water or wandering freely with its tick-picking bird on its back; a solitary Tusker (*Elephas maximus*) scaling a hill, browsing tender branches and bamboo leaves; all these wonderful wild animals and birds have their place in the forests, grass lands and mountains of India. The sight of their most amazing Pageant in their wilderness brings a realization that the earth does not belong to man alone and instils (for the moment, at least) a sense of proportion.

It is a dismal comment on our civilization that since 1900 many animal species have disappeared from the face of the earth and forests are devastated. As man moves in, the larger spectacular mammals begin to disappear. Either they 'take to the hills', go into hiding, or face extirpation in one way or another. The remaining animals are wary. The spotted deer or cheetal, which were once not nocturnal at all tend to become largely so. To find even the larger remaining animals the naturalist with the most benign intentions is compelled to act like a hunter and stalk his game with extreme precaution. Even a buck and doe stand guard while their fawn drinks daintily in a pool or stream. The wild life has obviously grown scarcer. The deer are shy and seek closer cover. The Tiger and the Rhinoceros in India, with a reward on their heads, move like a silent shadow through the hilly country bordering plains. They have come as nearer extinction as any. A few among these animals are still alive especially the Rhinoceros in the Kaziranga sanctuary. The Asiatic Lion also has just been saved. Some 285 lions have been counted recently in Gir Sanctuary (1965 census). A few thousand Wild Ass or Onager are safe in the little Rann of Kutch. In the open country the Black Buck (*Antelope cervicapra*), the Chinkara or Indian Gazelle (*Gazella gazella*), the Muntjac or Barking Deer (*Muntiacus muntjak*) and among birds the great Indian Bustard (*Chorotus nigricops*) and the Floricon (*Sypheotides indica*) are likely to be extinct at no remote date.

Animals and birds do need land and solitude just as men do, sometimes in order to reproduce themselves and perpetuate their species in peace. Man's greatest mission is to protect life, not to destroy it. Our virgin forest areas have almost gone. At least the remaining areas, and as many kinds should be preserved. As the continuity of forests is broken with the advance of industry and agriculture, Elephants, Bisons and other animals,

for instance in Mysore State, are feeling difficult to pass from one pocket of jungle to another in search of food and water. They need to be rehabilitated in a permanent area of jungle sanctuary large enough with food and water and a sprinkling of salt licks to carry a reasonable number of elephant herds and other animals.

It needs foresight, courage and determination on the part of the Forest Department to tackle the problems of conserving diminishing Wild Life stocks by up-to-date methods. The problems are vast and urgent. The recalcitrance of a rising population, the increased efficiency of modern weapons, the ubiquitous jeep and the terrible encroachments of ever increasing herds of cattle and buffaloes are the manaces to the wild life.

In a new plan for conservation measures should be indicated for protecting some selected forest area as 'Nature Sanctuary' and for protection of Wild Life by allotting suitable Wild Life sanctuaries in each district or State. That would be the only solution for saving the local wild life and its habitats. Rangers must be trained in principles and techniques of Wild life conservation and management.

A fairly extensive ecological unit comprising blocks of Evergreen and Semi-evergreen forests, sholas, moist and dry deciduous forests and scrub forest, hills and valleys, streams, water holes, salt-licks, etc., suiting and accommodating wild animals and birds to different habitats should be selected. The jungle sanctuaries should be permanently protected and improved and well managed because of their botanical, zoological and scenic interest. Such sanctuaries are quite necessary to study and determine the carrying capacities and different ecological habitats, factors limiting the increase of wild life populations and how they can be overcome; territorial and breeding habits, their physical make-up and their modes of life; the significance of migrating movements; food and water preferences of different species in their natural setting; the precise niche-functions of each species in the biotic community and its inter-relationship within the whole habitat; particularly its effect on soil and water; the role of predators such as tigers, lions, leopards, wild cats and wild dogs and the effect of natural predation; the effect of fire and its use as an instrument of habitat management, etc.

The primary object of the Forest Department is to produce a crop from the soil. In doing this it is inevitably creating and then conserving a range of habitats and of scenes which with a little bit of special attention and management, can be complimentary to the Wilderness parks and the Wild Life sanctuaries set apart. In those places people can learn about the flora and fauna, soil conservation and the conservation of Wild Life and understand the order of Great Nature and the interdependence of life in its natural setting and seek the

spiritual refreshment that being natural can produce. Forests, Nature Reserves and Wild Life sanctuaries are a nations' assets. They belong to all. Everyone benefits from such conservation. That is why they must be conserved and looked after as a living gift for posterity.

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A Field Survey for the Management of Big Game

By

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The term, big game, is defined as a group of large mammals, hunted for sport, which usually weigh over one-hundred pounds. The chief representatives of this group are the ungulates or hoofed animals, and the larger carnivores. India has a wealth of big animals, more than 40 species. By comparison, North America has less than 20. Many of India's big game animals, such as the Swamp Deer or Barasingha, the Kashmir Stag, the Nilgai or Blue Bull, the Fourhorned Antelope, and the Blackbuck, are unique to India, i.e., they are found nowhere else in the world. Strictly speaking, extremely rare species, or those which are no longer hunted for sport, such as the Great Indian Onehorned Rhinoceros and the Indian Lion, should perhaps no longer be classified as big game. Nevertheless, they belong to India's ancient and once fabulously rich wild life heritage.

Unfortunately, the unique Nilgai or Blue Bull is generally regarded by graziers of livestock and others as nothing more than a pest. In some states, such as Uttar Pradesh, a bounty is even offered for its destruction. The solitary tiger is too often considered as an enemy of man and is exterminated by any means possible, particularly when it levies tribute from domestic livestock, which have replaced its normal fare in most areas. Yet both of these wild creatures have a right to perpetual existence and they can only be perpetuated by carefully considered management plans.

Plans are executive work sheets and are generally based upon established policies. When the policy in a given district or state is to perpetuate the Nilgai, for example, we can then draft a plan for the creation of a refuge devoted to its preservation. The formulation of a policy is the function of the executive officers of the district or state. Also, they must approve a management plan, drafted by their trained field men, for it to become effective, legal, and workable.

Big game management is the union of economic and ecological principles formulated to perpetuate, yet control, the populations of different kinds of animals for their economic

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and aesthetic value to man. Before we can draft a management plan for the Nilgai, as a typical example, we must make numerous field surveys of the physical, biological, social, and economic characteristics of the district in which it is found.

Physical characteristics are the topography, water sources, soils, land use and climate. Only certain combinations of these features are favourable for survival of the Nilgai and only detailed field studies by trained personnel can discover its requirements.

Characterization of biological features requires more than simply noting the presence of other animals. We must note the approximate numbers of the principal species and areas preferred by the Nilgai at different times of the year. We must know seasonal migration routes, if such exist. Of course, an animal's presence is always related to vegetation—not just any greenery, but to certain plant communities. Moreover, these preferences change as the plant forms change with the season. Thus, an area allocated to a particular species must include its vegetative needs for food, shelter, and water for every day of the year.

Any animal in the course of a day or a season must have the types of cover essential for its welfare and comfort. These particular needs are a feeding place, hiding places, escape routes, sleeping quarters, sunbathing places, breeding grounds, and perhaps different places for rearing the young. The cover on the area must be diverse in species composition and of varying density so as to meet these needs. Often changing topography produces a diverse plant community on a relatively small area, thereby fulfilling the basic needs throughout the year for a particular animal.

Furthermore, we must know as much as possible about the animal's behaviour and ecology. Broadly defined, ecology is the relationship of an animal to its environment, including both its physical surroundings and all animals and plants which may influence it in any way. Some questions to be answered are: When and where does the animal feed during each season of the year? Which, if any, insects are serious pests? Does it transmit diseases to, or contract diseases from, domestic livestock? What are its predators? Do the very young ever die of inclement weather? How serious a drain on the population is sport hunting?—poaching?—accidents? Does it compete with livestock or other big game? If so, how, when and where?

The social practices of the community must also be considered. How close do people reside to the proposed refuge? Are grass cutters, or others, wandering over this area? What are the attitudes of local residents towards this animal—friendly, indifferent, or antagonistic? What means of publicity are available to make the local citizens aware of the unique status

of the Nilgai ? Are they aware that it is worthy of protection at some cost to themselves ? What percent of the people, if any, read the newspapers ?—hear the radio ? The local citizens may often assist or handicap the authorities in the management of a big game species or refuge.

Other considerations: What recreational opportunities may be found in the neighbourhood ? How far would people have to travel to observe the Nilgai in its park ? What is the status of land ownership on which the animals are found ? If it is public land, a proclamation by the proper authority can make it into a refuge. But if the animals are on private land, can it be leased or purchased ?

Economics must always be considered in any survey concerned with the management of big game. The income and expenditures of people becomes a matter of interest. Can the state charge for hunting fees or visitor permits so as to meet all or part of the expense for the management of the area ? What is the law enforcement for the area ? Its cost ? How much will it be respected by the local people ? And, under whose jurisdiction is it ?

In conclusion, we see that trained men are needed to evaluate a district having populations of one or more species of big game. Also, modern game management is as detailed as is good business management. India can save its big game species by starting a "crash programme" to find the ecological and economic facts necessary for the maintenance and regulation of its faunal assets.

Some of the Indian big game species that are rapidly declining in numbers or that are already on the danger list are the Swamp Deer, the Kashmir Stag, the Blackbuck, the Nilgiri Tahr, the Tiger, and the Indian Lion. It should be realized that the remnants of these species and the wild areas which they inhabit are a priceless economic asset as well as a vital resource in terms of human welfare. At least a sufficient number of these animals, and their natural environments, should be saved to serve as a gauge against which to measure man's irreversible changes and to appraise their consequences. India's big game species have existed far untold centuries. Why not let them exist for a few more !

Jaldapara on a Winter's Morning

BY A. B. HAWLEY

Until that cold winter's morning in the Dooars earlier this year I had only visited one Sanctuary in India, that near Hazaribagh in Bihar, which gave me my first introduction to India's Wild Life. There I had succeeded only in obtaining fleeting but unforgettable glimpses of the magnificent sambhar and the delicate barking deer. It was in October, and one was lucky to see a tiger or a panther then.

But Jaldapara held much promise. My knowledge of the Sanctuary was limited to the films and slides of some of those who had visited Jaldapara and to the short description in E.P. Gee's "The Wild Life of India", in which he says it has about 40 to 60 rhino (1964): and was "created in the early thirties mainly due to the efforts of E.O. Shebbeare who has played a big part in the preservation of the Indian rhino".

We had arrived by Land Rover from Toorsa Tea Estate bordering Bhutan at 4.30 a.m., after an exceedingly rough ride along a road which should surely be repaired to encourage those who wish to visit the Sanctuary in a car. We were waiting for an army officer who had also arranged to come along that morning. A few minutes after our arrival we heard a couple of shots in the vicinity of the Tourist Lodge at Bara Dabri, and on inquiring what was the reason, we were told that a wild bull had been attempting to get in among the forest department's elephants, and these were efforts to get it back before any damage was caused.

We walked over to where we were to climb on to our elephants. All was quiet except for the rustlings of hay and the rumblings of elephants, ghostly forms which we gradually made out more clearly in the full moonlight. There were four elephants at Jaldapara all well trained in their task of taking people round the sanctuary safe from rhino and the hanging lianas of the thick jungle. After much waiting round the dying embers of a fire, a near-by cock crowed as if to summon us to action. Our mahout Kancha came up with his charge Phulmati. The elephant knelt down. After carefully testing the safety of our cameras and binoculars we climbed on, and at a deliberate lumbering pace set off through the semi-darkness.

Jaldapara Wild Life Sanctuary, for those who have not visited it, has an area of 92 square miles, intersected by several branches of the Malangi and Toorsa rivers flowing down

from the hills of Bhutan. Much of the more dense jungle which once covered the area has been cleared by burning to allow more light and to encourage the growth of grass, thus providing food for the wild life of the sanctuary. An arm of the Malangi is the first water to be crossed, a few minutes from Bara Dabri.

The sky is lighter now, but over the low lying land a dense white mist still twists and swirls, hiding all from view. Gradually over our left shoulder dawn begins to infuse the eastern skies with colour. Ahead of us we can make out an expanse of open ground dotted here and there with trees and covered with thick grass. There is no life yet visible, though we scan the land and sky with our binoculars—not an easy task on a moving elephant. The mahout looks down for signs in the soft mud below and we follow his example. Ahead the Malangi appears in view. A pair of yellow-wattled lapwings raise the alarm giving us our first glimpse of Jaldapara's wild life. As we cross the river a solitary heron gazes intently into the water a hundred yards below us. We are manipulating our cameras when the elephant stops on a sudden, and our eyes follow Kancha's *ankus* pointing to something below us. He whispers "BAGH". I distinctly saw pug marks pressed into the soft earth.

Toward the river course's edge we wind our way through the tall IKRA grass until we reach the steeply eroded bank. The calling of the red jungle fowl greets us as we enter the dark jungle and forge ahead. There appeared to be little light so far and it was not until we reached a forest lane some twenty minutes later that we saw a jackal and felt that the spell was broken. By now we were travelling southwards parallel to the rivers, with tall dense ranks of IKRA grass towering on both sides of the well-maintained forest lanes. Kancha was continually looking down reading the fresh pages of forest life which had been written since the day before. All the white parakeets and mynas called from the tree-tops and white and yellow wagtails bobbed and flew below us.

Suddenly Phulmati stopped, and as Kancha pointed down to the ground at our right we could barely make out the fresh indentation of some large animal that had chosen this spot to leave the track and plunge into the tall elephant grass. We followed. Ten minutes later we came through a small line of trees and found ourselves on the edge of another river course with taller grass thickly covering it. The tracks were still visible and we were so busy looking down that we did not notice anything when Phulmati stopped abruptly. Kancha raised his *ankus* and pointed. Barely ten yards ahead of us stood a bull rhino. The mahout eased the elephant around and we clicked. At last the rhino made off with its comical gait. We followed at a distance until it came to the main Toorsa bank and plunged into the river, obligingly pausing in mid-stream to see if we were following, and giving us a fine view of its

magnificence mirrored in the icy water, with a back-drop of the Bhutan hills and the far off peak of Kanchenjunga already bathed in sunlight.

We turned back and entered the forest at what must have been its densest part. For an hour we laboured on, the elephant resolutely clearing all before her. The light was poor, but our eyes soon became accustomed and before long we were able to surprise a sounder of pig. A lone barking deer did not allow us to get too close but quickly threaded its way through the jungle and made off.

At length we emerged from the thicker forest on a wide cut lane and were presented with a view of a solitary MUKNA feeding on the edge of the tall elephant grass on the other side. The mahout quickly loaded his single barrel 12 bore and proceeded warily. A little further down we ourselves entered the elephant grass, making slow progress through the 20 feet reeds which sprayed us with the stored up rain drops of two days before.

Suddenly we found ourselves descending into the first river course which we had crossed and we were in the open once more. The shrill piping of a redshank betrayed our presence and a brilliant kingfisher flashed past. What had been to us mere forms in the lightening dawn could now be seen in sharp relief against a cloudless sky. A pair of partridge disappeared from under us with a whirr of wings, and then we found ourselves once more among the trees that surround the Tourist Lodge at Bara Dabri.

Jaldapara has much in it to attract people, but the method of booking seems a little haphazard and a telephone connection to the office would surely increase the number of visitors. The sanctuary itself appears well maintained, though accurate reports on poaching are difficult to obtain. I can only hope that the inspecting officers who toured Jaldapara during the two days previous to our visit were as satisfied as we were on a first impression. One hears poaching stories at many game sanctuaries but without a detailed and prolonged study in the area, it is impossible to pass judgements.

It is very gratifying to find a sanctuary of such a small area in which large animals such as rhino and elephant can exist unmolested and in protection. It seems the existence of the Indian one-horned Rhinoceros is ensured; but we should never relax our efforts, not only in conserving the heritage of our wild life but in informing others of our actions, and of the reasons of our actions.

The Breeding of Indian Rhinoceros, Rhinceros Unicornis at Whipsnade Park

By

E.H. TONG, F.L.A.S.

Mohan, a male Great Indian Rhinoceros came to Whipsnade on 7th August 1947, and was believed to be four years old on arrival.

The Society decided in 1950 to obtain a female from the Assam Government but although many males were caught, it was not until 13th February 1952 that a female was captured in the Kaziranga Game Reserve. For a variety of reasons this female which was named "Mohini" did not arrive at Whipsnade until 16th July 1952. She was then stated to be two and a half years old.

She arrived at Whipsnade in the evening, after Mohan the male had been shut up for the night, and she was put in the adjacent house. Both houses are built of concrete blocks with asbestos roofing with no windows; nevertheless Mohan sensed Mohini's arrival, and the following morning proceeded to bend some of the heavy tubing surrounding his enclosure, and also damaged part of the asbestos roof of Mohini's house. He was most interested and when both animals were yarded side by side, was very restless.

On 8th June 1954, after Mohini had been at Whipsnade for two years, she first came into oestrus. She was then believed to be four and a half years old. As a result, it was decided to introduce her to Mohan at 7 p.m. that evening, but not without some apprehension as the impression had been gained that Rhinoceros did not readily live together in captivity. In fact a pair at Whipsnade pre-war had fought and eventually the female was removed to Regent's Park. A pair at Chicago Zoo never became reconciled to each other. Precautions, therefore, had to be taken to avert any possible trouble, so galvanized iron sheets and hammers were kept in readiness to create as much noise as was possible. In addition the fire pump was connected up to the mains and the engine kept running.

The doors of both houses were opened simultaneously at 7 p.m. and Mohan and Mohini met in the middle of the paddock for the first time. The female continually emitted a shrill whistling sound and passed urine at short and frequent intervals. Both animals stood nose to nose, each waving the head up and down for minutes at a time. The male appeared to

be somewhat afraid and broke off and ran away several times until eventually he went into the pond, standing up to his neck in water, and although Mohini came to the edge of the water, she failed to entice him out. After some time she returned to the centre of the paddock where Mohan later joined her and the head nodding continued, but all the time he was backing away until finally he galloped for the pond with Mohini in hot pursuit. Mohini emitted a shrill whistling noise and Mohan from time to time a lower whistling note with lots of loud blowing for most of the time. At dusk we became somewhat worried that Mohan would become chilled if he remained in the water throughout the night as all efforts to persuade him to leave the pond failed, but when it was almost dark he came out, and in the morning they were sleeping together in Mohini's house.

From the following table it will be seen that Mohini came into oestrus at intervals of 40-50 days for the next two years, the last observed oestrus being on 29th June 1956. Oestrus usually noted in the morning and lasted for twenty-four hours only.

First came into oestrus on 8th June 1954 and then on:

3. 8.54.	
22. 9.54.	50 days
5.11.54.	44 days
17.12.54.	42 days
27.1.55.	41 days
28.4.55.	50 days
9.6.55.	42 days
26.8.55.	78 days
7.10.55.	42 days
10.2.56.	126 days
20.3.56.	39 days
11.5.56.	52 days
29.6.56.	49 days

Mohan (the male) appeared indifferent to Mohini on these occasions, but seemed to have his own period of oestrus or heat two days later. This view is shared by the Calcutta Zoo and also by Doctor Dillon Ripley.

Mating, nor anything approaching, has ever been witnessed, although Mohini occasionally whistled during the evening when in oestrus.

In the summer of 1955 it was suggested that the diet which consisted of clover hay, green foods, oats and maize might be too highly nitrogenous, so the feeding of clover hay was discontinued, and substituted by good meadow hay. It is known that rich clover hay contains oestrogenic substances that can have a deleterious effect on the fertility of some male animals. Despite this substitution, however, little or no changes in the behaviour of the male was observed and he still appeared to have his period of sexual excitement two days after the female's oestrus.

Professor E.C. Amoroso of the Royal Veterinary College was consulted and it was decided to administer sex hormones to the male. Owing to the thickness of the hide it was impossible to administer by injection and so tablets were administered orally, the technique being to thoroughly crush the tablets and feed between slices of bread.

The following details show the courses of sex hormone treatment given:—

Methyltestosterone (Organon Lab.)

Course I	150 mgm. t.i.d.
5th June 1956	15 × 10 mgm. tablets three times daily for four days.
Course II	150 mgm. t.i.d.
18th June 1956	15 × 10 mgm. tablets three times daily for four days.

Dehydroandrosterone (Organon Lab.)

Course I	150 mgm. once daily
9th August 1956	15 × 10 mgm. tablets × 12 once a day.

It will be noted that the last recorded period of oestrus was 29th June 1956 and the course of Dehydroandrosterone did not commence until the 9th August 1956.

Hopes that successful mating had taken place began to arise therefore, and in the late summer of 1957 it was almost certain that Mohini was in calf. In fact Keeper Rogers definitely stated that he had seen the calf move.

On the 22nd October 1957, Mohini's mammary glands became active and increased in size as the days went by. There was, however, no noticeable pelvic spread.

On the 29th October she became very restless and made a dismal bleating sound on and off all day. She carted her straw bedding from the stable to the yard and it was obvious that she was in the first stages of labour. The public and staff were completely excluded

from the immediate area as she appeared to have an antipathy to all humans and wanted to get right away. She ate very little of her evening feed and at 4 p.m. was shut in her house.

The next morning, the 30th October 1957, Keeper Rogers found that the calf had been born and was up and suckling.

It will, therefore, be seen that from the last observed oestrus to the time of birth, the duration of gestation was 488 days.

The foetal membranes were found complete and were removed from the stable immediately.

The baby showed very pink under the dark skin on the first day but this was rather less noticeable on the second and subsequent days and soon was only to be seen at the folds.

The vulva of the baby was very prominent at birth and it was possible to sex on first sight. She was a perfect replica of her parent except that the head appeared elongated and the horn was absent.

It is interesting that when the infant first comes out into the yard each day it urinates freely, at the same time adopting a squatting position like a bitch.

Immediately after the birth of her calf, Mohini seemed to be her usual docile self, but as the days went by she became suspicious and nervous of all human acts. When press photographs were first taken on the 5th November she ignored photographic flashes, but since then flashes have had to be banned. Equally a new electric fire, although suitably "dulled" was not tolerated and had to be removed from the house. An immersion water heater was filled with water ready for the cold weather, but Mohini refused to enter the house until the water in the tank had ceased dripping. Her hearing is obviously very acute.

At the end of the first week the baby had grown considerably stronger and had started to push her mother head to head. Mohini on these occasions played very vigorously and it was fearsome to watch as she was so careful and yet so very clumsy.

To The Evening Flight

The flights came fast, but dusk had dimm'd,
The eastern skies to grey,
And night had veiled and softly limned
The bright hours of the day;

And there we sat, with weeds and wet,
By waters chill and cold,
To watch the high flights pass and yet
Their sleek formation fold:

From arrowed line to curling wisp
As smoke the pintails fell,
With whirring wings which softly kiss'd
The grasses loved so well,

A whirr, a blurr, a flash of wings,
A splash, a lonesome call,
A thousand ephemereal things,
As flight on flight may fall,

We watched them rising on the sky,
And passing, out of range,
Yet nature's instinct makes them shy,
And shadows make them strange;

These birds that fly the twilit sky
And weave upon the air,
Such threading patterns row on line,
Must surely seem so fair:

A ghostly string of swift dark things,
They pass and disappear,
A whirr, a blurr, a flash of wings
Is all we see or hear;

Yet all the while we wait our chance,
By nature's haunts so wild,
We feel a part of that romance
So great and undefiled,

A prayer, a peace, a passing flight,
A sportsman and his birds,
Yet none within the vast dark night
Can give that feeling words:

It is a sob it is a sigh,
It is a challenge thrown,
For one must live and one must die,
And each must find his own:

I still can hear the last report,
A bird fall from the sky,
And there I found for there I sought:
But a pintail had to die...

Alfred Raoul Hasan Imam.

NEWS & NOTES

Nepal

The Chitawan Wild Life Sanctuary and King Mahendra National Park, some of the last refuges of the great Indian rhinoceros are being better organised and looked after under the personal instructions of King Mahendra of Nepal. About 25,000 squatter cultivators have been removed to other areas and provided with land. Mr. E.P. Gee surveyed the area in 1959 and 1963 and reported a decrease in numbers from 300 to 160. Mr. R.S.M. Willan, the Chief Conservator of Forests, Nepal reports the presence of 35 calves in the area and this is a very hopeful sign.

Mr. John Coapman on a piece of land leased to him has started a tourist hotel, 'Tiger Tops' on the model of 'Tree Tops' in Kenya. A detailed report on the venture will be available soon.

Corbett of Kumaon

By

WALTER LUTHER

In 1944 there appeared an exciting book on shikar which was destined to be counted among classics of adventure. "Man-Eaters of Kumaon" was an amazing first book which brought sudden fame to its author, Colonel Edward James Corbett. Now translated into seventeen languages, an introduction to the book is hardly necessary in our day. It has appeared in scores of editions including several paper backs and is read and enjoyed all over the world by millions of people, majority of whom have never pressed a trigger or passed through an Indian jungle.

Corbett was nearing seventy when he sent the manuscript of Man-Eaters of Kumaon to the Oxford University Press. Its author, a modest Anglo Indian, had expected little and never thought that the book of his experiences with the man-eating tigers of Kumaon would become a landmark in the world of adventure stories. The publication of this book took the world by the proverbial storm and Corbett, a household name in Kumaon, became known all over the world as the greatest hunter of our time. But Man-Eaters of Kumaon was not just a book on shikar adventures; it was a brilliant study of that most majestic animal of the Indian Forest—the tiger, and a sympathetic understanding of its behaviour under different circumstances.

In Kumaon, which lies in the foothills of the Himalayas, life in the tiny villages situated in the heart of thick forests is simple, lonely, and far removed from all civilization. The appearance of a man-eater near any of these villages can become a terror and dread which words cannot describe. In his story of the Thak man-eater, Corbett tells us that the dread of this single animal not only terrorized the population of villages scattered over an area of fifty square miles, but also held up work of some ten thousand men felling trees in the forest. Again, in Garhwal, for eight years more than fifty thousand villagers lived in nightly fear of the Leopard of Rudraprayag. These villages of Kumaon connected with civilization by dusty paths that ran through thick forests, could send news of man-eaters only through the 'dak-runners' and often the man-eater had time to strike twice or three times before news of one victim reached the District officers. At such times both official and unofficial appeals from the villagers came to Corbett, who spent over three decades in pursuit of man-eaters, during which time he rid the district of Kumaon of a dozen man-eating tigers and leopards.

Corbett's early life was spent in Naini Tal. Situated 6,400 feet above sea level in the Himalayan foothills, Naini nestles in a valley running east and west. It is surrounded on three sides by hills with a lake in the centre about 1,500 yards long and 500 yards broad. Rising steeply from the lake the hills are well wooded, mainly with evergreen oak and on one slope with a beautiful forest of Cypresses. Dotted all over these hills are red-roofed houses. Gurney House, where Corbett lived, still stands on the western slope some five hundred feet above the lake. Bought by an Indian friend of the Corbetts, it is used by them only as a summer holiday home and in all essential respects is the same as it was when the Corbetts lived here. The old furniture, old books, old pictures, including two of Corbett's etchings hanging on the wall, are still there.

Corbett belonged to a rather large and mixed family. At 21 Mary Jane was left a widow, her husband Charles Doyle being killed in the Sepoy Mutiny of 1857. He was survived by the young widow and three children. She later married Christopher Corbett, a widower, who brought with him his two sons and a daughter from his first marriage. Christopher Corbett and Jane had six children of their own and Jim was the second youngest of these six. The family spent nine months in Naini where the children went to school and Corbett had his early education. In winter the family migrated to their house at Kaladungi. This place at the very foothills was surrounded by thick forest, teeming with game of all sorts, and it was here that Corbett acquired his first love of the jungle. Although he was given lessons in the rudiments of Shikar by his eldest brother, he was essentially a self-taught man. From his early life he showed all the qualities that make a good hunter and was destined for jungle stardom. Endowed with a remarkable power of observation and a keen mind, he was also fearless. As a boy, armed with a muzzle-loading gun, he had roamed these forests day and night and they held no fear for him.

Schooling over, Corbett was compelled to remove himself from his family and from the hills and forests he loved so much. He became Trans-shipment Inspector at Mokameh Ghat. The Ganges river at this place had no railway bridge and the traffic and goods had to be trans-shipped from one side of the river to wagons waiting on the other side. His days were hard working, a routine uninterrupted with holidays even on Sundays. But he worked at this strenuous job for two decades and has devoted the last few chapters of "My India" to the nostalgic memories of Mokameh Ghat.

Corbett served in the two world wars. In 1917 he was commissioned in the Indian Army. Being a man from the hills he had immense physical strength and powers of endurance and acquitted himself well as an officer. It was during this period he helped to raise a

Labour Force, part of which he took to France. He was passed sixty when the second World War broke out, but 1944 found him a Lieutenant-Colonel in the Indian Army. He was given the difficult job of training men for jungle warfare. He, however, found himself well-equipped to come to terms with this very arduous job, for he had been long in contact with the jungle and possessed all the skill he needed in adapting himself to any emergency and to any situation in it. He set up his camp some ten miles away from Naini Tal. It was an exhausting grind, and Corbett, well advanced in age, lived on his physical capital. He was struck down by serious illness and was laid up for many months.

Corbett remained a bachelor, but he had a constant companion in his sister Maggie, who loved and nursed him devotedly, and her companionship ever enriched his life.

Corbett was a familiar figure in Naini Tal. He was often seen sitting by the lake with his fishing rod or trolling in a boat. A friend of the rich and the poor, he counted among his acquaintances Governors and poor and simple farmers living in the villages of Kumaon. To these villagers he was a saviour, a friend, a helper, and was held in deep awe and respect by them. He was an adept hunter, and the techniques he applied in shooting the man-eaters were often unique. On two occasions he dressed up like an Indian village woman in a brightly coloured sari, using himself intentionally as a bait for a man-eater. He also had a flare for mimicry and learned to immitate the calls of tigers and leopards. That he managed to lure the man-eater of Thak to its death by giving her a call, is enough proof of his dexterity. A notable feature of all his pursuits after man-eaters is his demonic determination and inflexible patience to follow and destroy the beast. He willingly risked his all for these campaigns, though they lacerated his nerves and wore him out physically. He never undertook these campaigns for a material reward or for glory, but in his own words "for the satisfaction at having done a job that badly needed doing, satisfaction at having out-manoeuvred, on his own ground, a very worthy antagonist; and greatest satisfaction of all, at having made a small portion of the earth safe."

In all Corbett wrote six books. An admirable feature of his shikar books is his simple and direct style, in which alone his stories could have been told so effectively. The subject matter of these stories is always tragedy, but Corbett tells them without grief and often with intense beauty.

During one of his sojourns Corbett stayed in the dak bungalow at Champawat. "I have a tale to tell," he says, "of that bungalow." But he did not tell it in the story of Champawat Man-Eater, for he thought "tales beyond the laws of nature" did not consort well with jungle stories. Did Corbett believe in ghosts? He gave no plausible explanation for the

story of the scream he heard in the night near Thak, but he did assert that it was a very real experience to him. Corbett did write down the story of the dak bungalow at Champawat with many others and was actually contemplating their publication, but for some unknown reason changed his mind.

In 1947 both brother and sister left India and settled down at Nyeri in Kenya. Besides his interest in a coffee estate of which he was a joint owner Africa offered him unlimited scope for animal photography, which had become a passion with him. 'Tree Tops' was very near to his home. It was a hut built on the branches of a great ficus tree, which gave a clear view of a lake and forest where elephants, rhino, leopard, waterbuck and other animals were regular visitors. It provided a place for Corbett to appease his enormous appetite for photographing the wild animals and watching them for hours. His last book "Tree Tops" is an account of the Queen's (then Princess Elizabeth) and the Duke of Edinburgh's visit to this hotel in the trees. Corbett was invited to accompany the Royal visitors.

There are several stories regarding Corbett's death—that he was killed by a lion in Africa, that a snake bit him. These are not true. The arena of the jungle where he played with death so often was also the place where he found peace and fulfilment of his childhood dreams. He loved the jungles and the jungles could not kill its lover. He was privileged to die a peaceful death on 19th April 1955, after a brief heart attack. He now sleeps in the cemetery at Nyeri.

This then, this humble quiet unassuming man, with a tall youthful frame and blue eyes, was Corbett, one of the greatest hunters of our time, who loved the animals and the birds and God's beautiful out-of-doors, and one who used his courage and talent for the service of his fellow men. He was made an honorary warden in Africa. India rewarded him with the Kaiser-i-Hind Gold medal and gave him the freedom of the forests—a privilege he prized above all titles, (he was also an O.B.E.). And finally, lest his services be forgotten; the Hailey National Park, created in 1935 and named after the then Governor of U.P., was renamed The Corbett National Park. As long as the Ramganga flows through this park, a crystal-clear stream bordered by Shisham trees, as long as sambur, chital, barking deer, elephant and tigers roam in these forests, the name of Corbett will be remembered and will live in the hearts of the Indian people.

Note:—The Wild Life Preservation Society of India organises a Corbett Memorial Wild Life Essay/Project competition open for students, every year in order to inculcate in them a love for wild life studies. Prizes are awarded for the first three Essays/Projects adjudged by competent persons.

Donations are needed for the permanent fund to make the competition more attractive and broadbased.

Editor.

"The Lucknow Week End"

By

E. V. LUCAS

To have the opportunity of hunting a tiger—on an elephant too—which by a stroke of luck fell to me, is to experience the un-English character of India at its fullest. Almost everything else could be reproduced elsewhere—the places, the bazaars, the caravans, the mosques and temples with their worshippers but not the jungle, the Himalayas, the vast swamps through which our elephants waded up to the Plimsoll, the almost too painful ecstasies of the pursuit of an eater of man.

The master of the chase, who has many tigers to his name, was Sir Harcourt Butler, whose hospitality is famous, so large and warm is it, and so minute, and it was because he was not satisfied that the ordinary diversions of the 'Luck-now Week' were sufficient for his guests, that he impulsively arranged a day's swampdeer shooting on the borders of Nepaul. The time was short, or it was, we were apologized to (there were only about six of us) for the poverty of the supply, a mere five and twenty being obtainable. But to these eyes, which have never seen more than six elephants at once, and those in the captivity either of a zoo or a circus, a row of five and twenty was astounding. They were waiting for us on the plain, at a spot distant some score of miles by car, through improvised roads, from the station, whither an all-night railway journey had borne us. The name of the station, if I ever knew it, I have forgotten; there was no room in my heated brain for such trifles; but I have forgotten nothing else.

It was after an hour and a half's drive in the cool and spicy early morning air—between the fluttering rags on canes which told the driver how to steer—that we came suddenly in sight of some distant tents and beside them an immense long dark inexplicable mass which through the haze seemed now and then to move. As we draw nearer, this mas was discerned to be a row of elephants assembled in line ready to salute the Governor. The effect was more impressive and more Eastern than anything I had seen. Grotesque too—for some had painted faces and gilded toes, and not a few surveyed me with an expression in which the comic spirit was too noticeable. Six or seven had howdahs, the rest blankets: those with howdahs being for the party and its leader, Bam Bahadur, a noted shikaree; and the others to carry provisions and bring back the spoil. On the neck of each sat an impressive mahout.

To one to whom the pen is mightier than the gun and whose half a century's bag contains only a few rabbits, a hedgehog and a moorhen, it is no inconsiderable ordeal to be handed a repeating rifle and some dozens of cartridges and be told that is your elephant—the big one there, with the red ochre on its forehead. To be on an elephant in the jungle without the responsibilities of a lethal weapon would be sufficient thrill for one day; but to be expected also to deal out death, was too much. In the company of others, however, one can do anything: and I gradually ascended to the top, not, as the accomplished hunters did, by placing a foot on the trunk and being swung heavenwards, but painfully, on a ladder; by my side being a very keen Indian youth, the son of a minor chieftain, who spoke English perfectly and was to instruct me in Nimrod's lore.

And so the procession started, and for a while discomfort set acutely in, for the movement of a howdah is short and jerky, and it takes some time both to adjust oneself to it and to lose the feeling that the elephant sooner or later and probably sooner—must trip and fall. But the glory of the morning, the urgency of our progress, the novelty and sublimity of the means of transport, the strangeness of the scene, and my companion's speculations on the day's promise, overcame my personal want of ease and I forgot myself in the universal. Our destination was a series of marshes some six miles away, where the gonds—or swamp-deer—were usually found, and we were divided up—some elephants, of which mine was one, taking the left wing, with instructions on reaching a certain spot to wait there for the deer who would move off in that direction: others taking the right wing: and others beating up the middle.

We began with a trial of nervous stamina—for a river far down in its bed below us almost immediately occurred, and this had to be crossed. I abandoned all hope as the elephant descended the bank almost, as it seemed perpendicularly, and plunged into the water with an enormous splash. But after he had squeezed through, extricating himself with a gigantic wrench, the ground was level for a long while, and there was time to look around and recollect one's fatalism. Far ahead in a blue mist were the Himalayas. All about were unending fields, with here and there white cattle grazing. Cranes stretched their necks above the grass; now and then a herd of blackbuck (which were below our hunting ambitions) scampered away; the sky was full of wild-duck and other water-fowl.

Of the hunting of the gond I should have something to say had not a diversion occurred which relegated that lively and elusive creature to an obscure place in the background. We had finished the beat, and most of us had emerged from the swamp to higher ground where an open space, or maidan, corresponding to a drive in an English preserve, but on

the grand scale, divided it from the jungle—all our thoughts being set upon lunch—when suddenly across this open space passed a blur of yellow and black only a few yards from the nearest elephant. It was so unexpected and so quick that even the trained eyes of my companion were uncertain. 'Did you see?' he asked me in a voice of hushed and wondering awe, 'could that have been a tiger?' I could not say, but I understood his excitement. For the tiger is the king of Indian carnivore, the most desired of all game. Hunters date their lives by them: such and such a thing happened not on the anniversary of their wedding day; and not when their boy went to Balliol; not when they received the K.C.I.E.; but in the year they shot this or that man-eater.

That a tiger had really charged upon us we soon ascertained. Also that it had been hit by the rifle on the first elephant and had disappeared into the jungle, which consisted hereabouts of a grass some twenty feet high, bleached by the sun.

A Council of War followed, and we were led by Bam Bahadur on a rounding up manoeuvre. According to his judgment the tiger would remain just inside the cover, and our duty was, therefore, to make a wide detour and then advance in as solid a semicircle as possible upon him and force him again into the open, where the hunter who had inflicted the first wound was to remain stationed. Accordingly all the rest of us entered the jungle file, our elephants treading down the grass with their great irresistible feet or wrenching it away with their invincible trunks. It was now that the shikaree was feeling the elephant shortage. Had there been seventy-five instead of only twenty-five, he said, all would be well: he could then form a cordon such as no tiger might break through. For lack of these others, when the time came to turn and advance upon our prey he caused fires to be lighted here and there where the gaps were widest, so that we forged onwards not only to the accompaniment of the shrill cries of the mahouts and noise of plunging and overwhelming elephants, but the fierce roar and crackle of burning stalks.

And thus, after an hour in this bewildering tangle, with the universe filled with sound and strangeness, and the scent of wood smoke mingling with the heat of the air, and the lust of the chase in our veins, we drew to the spot where the animal was guessed to be hiding, and knew that the guess was true by the demeanour of the elephants. Real danger had suddenly entered into the adventure; and they showed it. A wounded tiger that now refused to budge forward any more, or complied only with terrified screams. Some of the unarmed mahouts were also reluctant, and shouted their fears. But the shikaree was inexorable. There the tiger was, and we must drive it out.

Closer and closer we drew, until every elephant's flank was pressing its neighbour, the outside ones being each at the edge of the open space; in the middle of which was the

twenty-fifth with its vigilant rider standing tense with his rifle to his shoulder. The noise was now deafening. Everyone was uttering, either to scare the tiger or to encourage the elephants or his neighbour or possibly himself; while now and then from the depths of the grass ahead of us came an outraged growl, with more than a suggestion of contempt in it for such unsportsmanship as could array twenty-five elephants, half a hundred men and a dozen rifles against one inoffensive wild beast.

And then suddenly the grass waved, there was a rustle and rush and a snarl of furious rage, and once again a blur of yellow and black crossed the open space. Six or more reports rang out, and to my dying day I shall remember, with mixed feelings, that one of these reports was the result of pressure on a trigger applied by a finger belonging to me. That the tiger was hit again—by other bullets than mine—was certain, but instead of falling it disappeared into the jungle on the other side of the maidan, and again we were destined to employ enclosing tactics. It was now intensely hot, but nobody minded; and we were an hour and a half late for lunch, but nobody minded; the chase was all! The phrase 'out for blood' had taken on its literal primitive meaning.

The second rounding-up was less simple than the first, because the tiger had more choice of hiding-places; but again our shikaree displayed his wonderful intuition, and in about an hour we had ringed the creature in. That this was to be the end was evident from the electrical purposefulness which animated the old hands. The experienced shots were carefully disposed, and my own peace of mind was not increased by the warning—'If the tiger leaps on your elephant, don't shoot'—the point being that novices can be very wild with their rifles under such conditions. As the question 'What shall I do instead?' was lost in the tumult, the latter stages of this momentous drama were seen by these eyes less steadily and less whole than I could have wished. But I saw the tiger spring, growling, at an elephant removed some four yards from mine, and I saw it driven back by a shot from one of the native hunters. And then when, after another period of anxious expectancy, it emerged again from the undergrowth, and sprang towards our host, I saw him put two bullets into it almost instantaneously; and the beautiful obstinate creature fell, never to rise again.

Wild Life Inventories

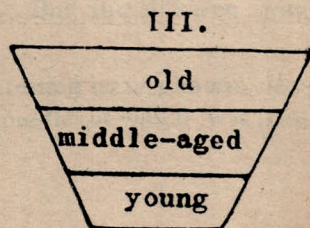
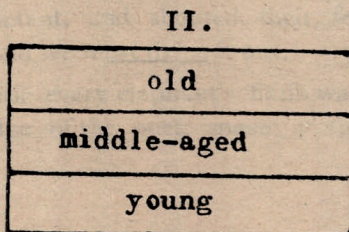
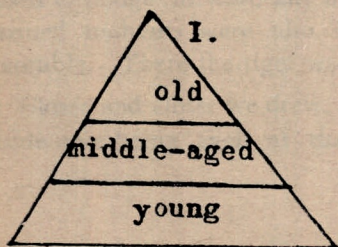
By

GEORGE H. KELKER AND JUAN SPILLET

The management of any business is critically dependent upon how much equipment, materials, or resources are under its ownership or control. The same is true for the management of any wild life species. Just as business must take an inventory of its stock in order to plan ahead and to evaluate progress, so must the wild life biologist or those managing wild life take an inventory of the animals in their charge. Only then can it be confidently stated that a species in a particular area is decreasing, stable in numbers, or increasing. And, if these inventories are reliable according to statistical analysis, the biologist can compute the average annual rate of net increase or loss. Thus, inventory work is a useful and necessary tool in the management of any wild life species and is more than a simple census count.

The taking of a wild life inventory may be for a particular purpose or for several purposes. The simplest inventory is to merely discover what species are present in an area, regardless of numbers. The next type of inventory would be to determine the sex and age class composition of the species. It is desirable to know the ratio between the sexes, particularly with big game (mammals one-hundred pounds or more on weight), waterfowl, and game birds. Most big game animals are promiscuous about mating and can increase rapidly with five to ten females. In contrast, most waterfowl and game birds are monogamous during the season of egg laying and hatching. Therefore, among these a disproportionate sex ratio fails to give the maximum rate of increase.

One element of composition which is sometimes difficult to determine is age classes. Among big game animals, trained personnel can usually distinguish adults, yearlings, and young in the field. Also, by noting the size of the antlers or horns, males can be further classified. However, for most ungulates age groups can be more precisely determined by the degree of wear on the teeth of individuals captured, alive or dead. The wear on the incisors is used extensively as an age criterion by livestock raisers, but is also a very useful tool for the wild life biologist. The composition by age classes is generally a reflection of the status of a species in terms of its reproductive potential. Three stages may be graphically represented:



In diagram I, the number of young is equal to or greater than the middle-aged class, which represents the reproductive ages. Among longliving animals, diagram II depicts a relatively stable population with a large proportion of old animals. These are non-paying boarders that utilize forage which would give better returns if consumed by the young animals, the class of potential breeders. Diagram III represents a senile or extremely low reproducing group.

The middle-aged groups, for some reason, are oftentimes low reproducers. Such a non-breeding condition was noticed in a herd of white-tailed deer on the George Reserve, an area of 1,300 acres or 526.1 hectares near Ann Arbor, Michigan in the United States. When two males and four females were first released in the Reserve, the group rapidly increased to a total of 164 head in six years. Their maximum rate of increase was approximately 65 percent annual gain. When hunting removed the excess animals, the herd attained the status of diagram III. Studies by the senior author showed that the number of fawns born at this stage was 0.5 young per female per year as compared to the maximum increase of 2 young per year during the first six years.

The age classes of any wild life species are difficult to determine. However, when a series are taken, the reproductive welfare of the species in an area is fairly well known. Nevertheless, in three or four years the status of a species in a given area may either appreciably improve or drastically deteriorate. Thus, this assessment should be done at periodical intervals.

An inventory may be generalized to note relative abundance, or it may be intensively conducted to obtain actual numbers. An example of the latter is the work of the junior author in the Keoladeo Ghana Sactuary near Bharatpur in Rajasthan. (Page 12).

A particular purpose for a wild life inventory is to determine how many animals should be removed on an annual basis by hunting or trapping to maintain the species at a constant level; or, if there are too many animals for the available forage, to determine how many should be removed to provide sufficient food and cover for those remaining. Another important function of an inventory is to enable the wild life manager to correctly inform the general public as to the scarcity of a particular species. In this manner public assistance can be enlisted to help protect this species. For example, in the United States an annual count is taken of the five-foot tall whooping crane. With the aid of the public the numbers of this extremely rare bird have been maintained between 35 and 40 for almost 20 years. Another rare bird is the California condor, a large vulture with a six-foot wingspread.

During the past ten years this bird has decreased from a total of 60 to about 45 head. Due to the scarcity of both of these birds, their annual count is a news item carried by all of the major newspapers in the country. A comparable case in India is that of the Great Indian Rhinoceros. By the early 1900's this magnificent beast was on the verge of extinction, but, due to publicity provided by the Indian press and the efforts of such conservation-minded men as Messrs. P.D. Stracey and E.P. Gee, this animal has been preserved. It is estimated that there are now approximately 400 rhinos in India. Their presence in such areas as the Kaziranga Sanctuary in Assam is not only of public interest, but also serves as a source of revenue by attracting numerous visitors to this area. Another animal which deserves similar treatment is the Kashmir stag. A reliable authority placed their numbers at less than 160 in 1964. Unless drastic action is soon taken, it may be too late to save this valuable species from extinction.

Seldom can a reliable inventory be taken at any time the administration desires. The reliability of any census depends upon many factors—trained personnel; available manpower; weather; seasonal congregation of the animals into herds or flocks, family units, or by sexes; time of day when they can best be counted; hazards of conducting the census; when the seasonal plumage can best be distinguished, as with most waterfowl and game birds, or when antler development or size can most readily be estimated, as with ungulates which periodically shed their antlers. These and other factors will vary between species and also from area to area with the same species. For example, the swamp deer in Kanha National Park (Madhya Pradesh) gather in herds in March and April, whereas the cheetal do not congregate until June or July. The majority of the cheetal males in Madhya Pradesh also shed their antlers between August and December, while in the states of Mysore and Madras they generally shed them between November and January.

The young of game birds are best counted when the first flight feathers have developed enough so that the young can fly 50 to 150 steps when disturbed. During this period the flight picture presented by a female with her brood usually allows an observer to make a full count of the brood. Of course, not all of the young will survive until maturity, but a few seasonal counts will establish the average proportion of survival.

A weakness of many wild life inventories is that all too often untrained personnel are assigned to the task. Those participating in inventory or census work must be trained and experienced so that they know as much as possible about the animals they are working with: their colouration, hiding places, habits, signs, etc. In brief, they should know all about the animals' basic ecology.

Those conducting a census should be trained in statistics or at least consult a qualified statistician, that has also had experience in biology, both prior to and after the census. First, a sampling procedure should be designed to cover all phases of discovering and accurately counting the animals. Second, the collected data should then be analysed to determine the probability of whether or not a true sample of the entire population or area was taken. Many field counts have approximately a plus or minus deviation of ten percent. With careful planning and diligent field work this error can usually be reduced.

The plans of any successful business must be based upon sound inventory work. The same is true in wild life management. Hence, the inventory must be carefully planned, executed, and analysed.

Introduction of the Indian Lion in Uttar Pradesh

By S.S. NEGI, B.Sc.

Retired Conservator of Forests.

It is well known that the lion occurred at one time over the whole of West, North and Central India. In the later century, lions were quite numerous in the Gangetic basin or Uttar Pradesh. It is a historical fact that the Moghul Emperor Babar used to hunt lions in the forests along the Jumna river between Delhi and Agra.

There is belief that the Indian lion is the original inhabitant of India and not the tiger. The tiger came into India later. This is supported by the fact that in the early Arayan literature, "singha", which is the name for lion, is mentioned and there is no mention anywhere of "sher" or tiger. Also, the carvings and statues in our ancient temples palaces and are of the lion and not of the tiger.

There are several reasons for the total disappearance of the lion from the North-Western and Central India but the main reason for its extermination to my mind can be attributed to the encroachment of agriculture on its habitat. With the cessation of internecine wars and advent of peaceful condition in India, people reverted back to their peace time occupation of agriculture. This resulted in large scale jungle clearance and the lion started receding down South-West. Ultimately, by the end of the nineteenth century, it almost

became extinct from India except in a remote forest area in the Saurashtra, North-West of Bombay, known as Gir forests.

There too the persecution of lions continued relentlessly by sportsmen and by the beginning of the twentieth century only about a dozen and a half lions remained. At that time, Lord Curzon, who was invited there for shooting, realised the gravity of the situation and came to the rescue of this noble animal and issued an order prohibiting its shooting. As a result of protection afforded, the lions started multiplying and now there are between 250 and 300 lions in the Gir forests—may be more now.

Although, the lion is now a fully protected animal, it is only confined to a small area of 500 sq. miles. The Indian Board for Wild Life felt the inadvisability of confining the lions in a single locality, because if some calamity occurs, this fine animal will be completely wiped out of India. It was, therefore, decided that alternate homes with similar surrounding as obtained in the Gir forests should be found for them. Consequently, the U.P. Government offered to provide an alternate home. I, as Chief Wild Life Warden, U.P. was saddled with the responsibilities of making arrangement for transferring the lions from the Gir forest of Saurashtra and releasing them in the U.P. forests.

The Chakia forests of Varanasi Forest Division, which have almost similar vegetation, terrain and climate as that of the Gir forests were selected and a new Sanctuary, known as the Chandraprabha Sanctuary, was formed for the release of the lions.

The total area of this Sanctuary is about 37 sq. miles with a perimeter of about 28 miles. It is situated about 42 miles South-East of Varanasi on the P.W.D. road to Chakia and Naugarh and adjoins the picturesque Chandraprabha dam recently constructed by the Irrigation Deptt. It is enclosed with a 9 feet high barbed wire fence to keep the domestic cattle out, which abound in that locality. The beautiful Chandraprabha river flows through it. There are also several perennial water sources in it. It abounds in blue bulls, and pigs. Chinkara, cheetal and sambhar are also found, but not in large numbers. There are a few panthers but no tigers in the area.

Although the U.P. Government requested the Saurashtra State to capture 2 lions and 4 lionesses for release in this Sanctuary, they could arrange for 1 lion and 2 lionesses only. After capture, they were kept in the Shakergarh Zoo for about 9 months, as the Govt. were not ready for releasing them in the Sanctuary. They were transported by rail from Junagadh in November, 1957. The lions started their long and arduous journey on November 12, and arrived at Chandraprabha on 21st November, 1957.

The lions were released by the Chief Minister, U.P., Dr. Sampurnanand on December 2, 1957 in the ten-acre enclosure. The enclosure was fenced with wave-wire netting upto 6 feet superimposed by seven strands of galvanised wire, making the total height to 12 feet. The fence was camouflaged by brush-wood and re-inforced from inside by 4 feet high fence of thorny bushes. The cages were placed inside the enclosure and by a system of pulleys and ropes the cage doors were lifted from 20 ft. high machans constructed outside 50 feet from the enclosure.

The object of releasing the lions in this small enclosure was to devise a suitable machanism for their release and to phase the release in two stages. It was considered desirable to keep the lions inside the small enclosure and feed them on live baits for some time, as it was feared that they may have lost their natural habit of preying on wild animals on account of their having been accustomed to hand-feeding during their captivity in the Zoo for about 9 months.

Having been confined in cages, which were smaller than their length due to wagon space difficulty, for about 3 weeks, it was thought that the animals would have become so weak and cramped that they will hardly be able to walk out of the cages. As an added precaution, we kept the animals hungry for 2 days and tied one goat, and 4 buffalo calves at little distance facing the doors of the cages. But all our expectations were belied and as soon as the gates were lifted the lions fled for their life and did not even look at the goat and buffalo calves tied for them. Unfortunately the younger lioness slipped through the fence and disappeared in the forest. The other two, fortunately, did not follow suit, but went into cover inside the enclosure. This caused great consternation and anxiety to us all and we had to remain on the machans to watch further developments. After about 10 minutes, the younger lioness appeared near the place where she crossed the fence and kept on watching and receding away from us along the fence and then disappeared to the farther side of the fence. Soon after, the two lions appeared on the farther side of the fence and all the three, one outside and two inside, moved towards our machans upto the point where the younger lioness crossed the fence. They had a good look at the spectators on the machans and receded back along the fence and ultimately disappeared from our view. All the spectators heaved a sigh of relief, got down from the machans and left in the cars which were parked alongside the machans, to the Tourist hutment constructed on the bank of the picturesque Chandraprabha river overlooking a fall of about 200 feet where they were entertained to tea. None of them, however, were in a mood to enjoy the tea and were anxious to leave for Varanasi to tell the harrowing and exciting tale of the release ceremony. At the same time, they must have been glad to reach back home safe.

The inner enclosure was broken down on 8th January, 1958 and the lions were set free in the Sanctuary area. During the period the two animals remained confined into the inner enclosure, they were fed on live baits introduced into the enclosure through a double door gate, which was made at the time of the erection of the enclosure. They were fed on live baits on alternate days for about a fortnight and thereafter every 4th day. For the lioness outside the enclosure, live baits were likewise tied near the enclosure to restrict her movements till the enclosure was broken down and she joined her two companions.

The three animals started roaming about freely in the Sanctuary and leading their natural life. They preyed on the wild animals which are plentiful in the area. They particularly preyed on blue bulls and sambhars which are easier to catch than cheetals and chinkaras. A strict watch was kept on their movements and every care was taken that they do not migrate out of the Sanctuary. For this purpose, live baits were tied once or twice a fortnight near the three covered pucca-machans constructed in the area for visitors to watch and photograph Wild Life.

The older of the two lionesses, named Rani, was seen with one cub on 28th February, 1958. Every search was made to find if she gave birth to one or more cubs but only one cub was seen. It has also been observed that since the cub was born to Rani, the younger lioness named Jaishri was seen with the lion, named Raja, and Rani was not seen with him.

They have since multiplied and their number is now reported to have increased to eleven. They are no longer confined to the Sanctuary and but roam about far and wide in the Varanasi and Mirzapur forests leading a normal life which I consider is the 3rd and final stage of the introduction of lions in the U.P. As the animal is protected and its shooting is strictly prohibited, these are bound to multiply further in course of time.

NEWS & NOTES

London—Moscow

CHI CHI the female Giant Panda has been flown from London to meet AN-AN the male Giant Panda at the Moscow Zoo. The international zoological marriage brokers hope the marriage to be successful. Moscow does not claim the baby, their interest being only scientific. They are the only two Giant Pandas in captivity outside China. The Zoo authorities in Moscow and London are to be congratulated on this example of international living, cooperation and co-existence.

Wild Life of India

By S.K. KOOKA

Extracts from speech at I.U.C.N. Conference, New Delhi.

India has a population of 450 million. Every Indian, without too much assistance from the Almighty, can aspire to reach the age of 44 before the undertakers reach him! I'm not letting you in on a secret if I tell you that as a country, we are short of food, short of clothing, short of a roof, terribly short of that vexatious commodity—foreign exchange.

And the patriot could say—when we have 450 million, a large number of whom can't get one square meal a day—how important is the survival of our cheetal, our sambhar, our kakar, our nilgai, our wild boar, our partridge, our quail. And if all of these are slaughtered by our meat-hungry—is it such a crime? The same patriot will ask—when a nation—ours—is a teenager, just eighteen years old, with problems a nation centuries old would run a mile from—when millions of our countrymen have blooded our cities and plains in the orgasm of freedom, their graves still warm—how important are the four-footed of our jungles—the very world is fearsome, as though it were evil. What's all the fuss about!

In E.P. Gee's fine book—The Wild Life of India, the dust jacket in bold type states—Foreword by Jawaharlal Nehru—as though the publishers hoped, that his great name might persuade Indians to look at a book on animals, that did not involve shooting them! And Jawaharlal wrote “In no country is life valued in theory, so much as in India, and many people would even hesitate to destroy the meanest or the most harmful of animals. But in practice we ignore the animal world.” Panditji talked about “the meanest of animals,” I'd like to think he had in mind the scorpion, the centiped, the viper—and not the four-footed who can only be as mean as man makes them.

Gentlemen, if the animals of India were ignored as Mr. Nehru said, you wouldn't be meeting in this hall today. They're being obliterated at a speed that is appalling.

A century ago, a hundred million, I repeat, a hundred million buffaloes roamed the prairies of the wild west of America. Buffalo hunters killed them for long. For their hides, yes, for their flesh, yes, and for their tongues, which were pickled and exported to England where they were regarded as a delicacy. Even the massive bones of that fine animal were ground and sold as fertiliser. And at the turn of the century, the buffaloes in America could be counted on the fingers of our hands.

The pioneers of the west wanted the lands of the Red Indian, and the Government encouraged the slaughter of the buffalo, because it meant the end of the civilisation of the Indian of the plains, which was based on the buffalo. And so ended in shame, a chapter in the history of a great nation. This is an old story. I don't ask your forgiveness for repeating it, because I think it has a great significance for what is happening in our land today. And for contrast, in the autumn of 1962, an Indian mongoose, fifteen inches long, was smuggled into the U.S.A. and found itself at the Duluth Zoo in the State of Minnesota. When the Federal authorities got wind of this, they ordered the Zoo to destroy the little fellow, because the mongoose is a banned item of import into the U.S.A.

Ten thousand angry citizens of Duluth, population a hundred thousand, showed up at the Zoo to protest against the death sentence, and soon there was a nation-wide campaign to stay the execution. The plea for mercy ended at the White House, and President Kennedy finally pardoned the little mongoose who was named Mr. Magoo. And this is what the President said "Let this story of the saving of Mr. Magoo stand as a classic example of Government by the people."

You can travel vast areas of our jungles today—from dawn to dusk and through the long night. What will you see at night? The wild cat, yes, the little Indian hare, the ever present jackal, the odd hyaena and the bold and friendly night jar who'll spiral into the air, literally, from between the two front wheels of our jeep.

Dawn will reveal a world of doves but no animals, save the squirrel. Looking up at the sky, you'll see a variety of hawks, and of course the inevitable crow in his dinner jacket, and finally, the great vulture, who comes to bury Caesar and stays to eat him, and like a well behaved guest, leaves when the repast is over. The animals are just not there, because muzzle loaders exist in vast quantity, licensed, unlicensed—four and five in each village, the owners familiar with each yard of their forest, as you are with the main street of your town. And in summer, when water is scarce, far scarcer than it is in New York today—the poacher and his muzzle loader will hide by the water-hole and murder every living creature within range—which he can eat and then sell the skin and sell the horns. And to keep out of trouble, he'll donate one rear leg to his village forest guard.

And all of you know the sham of crop protection, to justify muzzle loader licences, with possession of the weapons for 12 months of the year—over long periods when there are no crops to protect. And no action is taken against the ownership of unlicensed muzzle loaders!

I'd like to repeat what Dunbar Brander of the Indian Forest Service said in 1928:

"I left India in 1922 but revisited it in 1928, and was appalled to find such a change in so short a period, quite common species being found only with difficulty. Game has almost disappeared and there is nothing to be seen along 200 miles of antelope country between Bombay and Ahmedabad. Forest Act and Rules are in my opinion excellent. It is in application that they fail. They fail in prevention of poaching. There is lucrative trade in game. The Forest Guard finds that the easiest plan is to take a percentage of profits. Rewards sanctioned by rules against poaching are too sparingly given and the Magistrates' sentences are quite often inadequate. I consider that some action in India is urgently required, perhaps more so than in Africa."

It has been denied by the authorities and will be denied again. But perhaps there is more than truth in the report that when the leaders of a village receive their licences for muzzle loaders, that village shows remarkable political sagacity at election time. If I may say so, Mr. Government, there is no party in this land who can oust you at the hustings. Your seat is a safe one, please be ruthless on new licences for muzzle loaders, please collect all weapons when the crops have been collected and confiscate unlicensed muzzle loaders. Your political image will not be impaired, but your wild life will have a longer lease of life.

'The truck driver hauling timber and a shotgun, with his headlamps ablaze and a taste for game, lends his hand to the extermination of game. Why should forest roads be open to and from the highway from dusk to dawn?

In this very city, in the older part of Delhi, there is a famous restaurant where partridge and quail are eaten each day of the year. They are netted in vast quantities. Why should their sale not be banned and made illegal, with punitive sentences for the guilty. Eight years ago 40 miles from this city, the black buck roamed the plains in beautiful abundance, today this lovely creature is sought after by the American tourist hunter as a rare species of Indian antelope.

The forest department's main problem is the growth of teak and other woods. Teak is a big revenue earner. The wild game, of which they are also the custodians, count for naught—alive or dead. The trees are precious and the revenue targets set for the sale of wood must be met. The forest officials are dedicated teakmen, to whom the creatures of the jungles mean nothing. Every teak tree is numbered, nurtured, watched over, reared with love and tenderness. Who is there to take the count of our heads of game. You'd need a

computer to count the trees, but kindergarten arithmetic would take care of the miserable number of animals that survive today.

There are villages in Madhya Pradesh whose inhabitants eat both tiger and panther flesh. I say this from first hand knowledge. There are tribes who live by the snaring and netting of small animals and birds. For additional equipment, they use a pack of hunting mongrels who seldom lose their prey. And being nomads, they cover a great deal of mileage and carry out a great deal of destruction. I'm not so sure that the palates of these off-beat gourmets couldn't be persuaded to switch to mutton and lamb, given the opportunity. If every village had an animal-husbandry cell, where the breeding of sheep and goat was encouraged by Government, there would be more meat for all, less craving and hunger for something other than green vegetables, less destruction of our wild game and healthier generations to come. But there is no movement in this direction.

With sadness we must admit that the powers that be in our land have vast problems to cope with—tremendous difficulties to solve. Wild life is low, awfully low, on the people, on the priority list. There is no awakening in the people, no realisation in the officials that this is a heritage which is not ours to squander, it's in trust, for us to hand down to those who follow us.

Books on our wild animals, movies on them, propaganda for them on a planned programme, should be started right now, with great emphasis for such propaganda in the villages and towns situated near forest areas. There should be massive propaganda amongst our children, who should be taught, as they can read, to be kind and good to their fourfooted friends of the jungle.

Apart from the shikar outfitters, who earn a restricted amount of foreign exchange for their hunts each year, little has been accomplished to make our sanctuaries, tourist resorts, with excellent accommodation, comfortable transport for sightseeing, and fast communication to and from the forests and the nearest railhead. Each and every one of our sanctuaries should have excellent accommodation, of which a big city would be proud. Special incentive and facilities should be given to hoteliers of repute to operate such establishments, which should remain the property of Government.

Would that our important leaders be asked to read the chapter entitled, The Riches of Wild Africa from Sri Julian Huxley's book, *Essays of a Humanist*. It is a blue print for our desperate situation. Africa's problems are our problems multiplied a hundred times. But Africa with her tremendous treasure of wild life is still a millionaire, in spite of the

highly organised poachers, where light aircraft are even used by the professional teams of butchers. We, on the other hand, are left with a comparative handful of our wonderful wild life, and even this we are most effectively liquidating. An employee of the Central Railway at Sohagpur, M.P. made such a lucrative living selling venison which he shot, that he had accounted for 1200 animals. Furthermore, he had receipts for payment of octroi duty for the dead animals to the Sohagpur Municipal Committee. This information was very kindly given to me by Mr. Viday Charan Shukla, M.P., who assures me that it is correct in every detail.

Take our magnificent tiger, who has no equal in the world. Before independence, they used to say of the Nawab of Bhopal, that in his State, one could not kill two things—a man and a tiger. For they were his preserve. And the rulers of our native states preserved their forests with great care, for to them wild life was a precious commodity. Today, those very same jungles are bereft of game—they've been poached dry by the muzzle loader, who might have paid with his life for his loot, when the Maharajahs ruled, and they are poached by the hunter in his flood-lit jeep, who can enter any forest road at night, because forest roads are a free for all—with no gates and no padlocked barriers at strategic spots.

God meant the tiger to live on venison and pork and not on the meat of cattle. Game is fair game for the tiger, and this was written the day the first tiger was conceived. And in the old days, a tiger who was declared a cattle lifter, was a badmash, a menace to property. But he was not one of the mill. He was an exception, because beef was not his staple diet. The tiger was not permitted to choose from the a la carte menu, for nature specified that he should eat lovely, juicy game, and work for his supper. But now the poor tiger, desperate for food, is more often than not, a cattle lifter. Because his true food has been taken away from him by man and he is left with no alternative but to steal cattle and pay with his life for it.

Herdsmen from the same village where the muzzle loaders are, poison their tigers and take revenge in one form or another, and so this magnificent beast is diminishing in very fast numbers. What is more, a tiger declared a cattle lifter—what else can he lift, is permitted to be destroyed without block or licence fees.

When we're dependent on America for our wheat, and on Russia for strategic aid, when we have a banjo-eyed neighbour who covets our territory, and another whose hate for us is an obsession, who in Government, will wear black, at the thought of our fauna slowly breathing its last.

The great sadness, lies in the fact, that the thousand problems that beset our country to-day cannot be more than transient. A day must dawn when our food, our clothing, our population, our housing, our steel, cement and foreign exchange will cease to suffer from growing pains. For we're a big nation, destined to play our written part in the history of tomorrow and the day after.

The great immeasurable sorrow is that when we've achieved our material goal, raised our standard of living, our hand a-bulging with automobiles, blast furnaces, readymade trousers, with plenty of jingle in the pockets, and liquor galore—for reason must surely prevail, it will be too late for the gnashing of teeth. Our heritage, we shall have buried by then, with a miserable attendance at the funeral.

You can rebuild Hiroshima, heal the wild moods of Etna and Vesuvius, and repair the handiwork of earthquakes that run amok.

Homo, given time, can make all whole again, with balsam and sweet aloes. But the man has yet to be born who can bring God's creatures back to earth, once man has slaughtered the breed.

If Ford Foundation could allocate a grant in 1963 of 7-3/4 million dollars to George Balanchine, to "Expand ballet in the USA over the next ten years", can't Peter Scott persuade the purse strings to salvage our heritage? Because gentlemen, I'm convinced that left to ourselves, our battle is lost. The outsider will have to show our Government the way, he will be listened to at home and abroad.

If our jungles are silenced for ever, and the sambhar tonks no more, no minister will dance a saraband for a dead animal. There are more important items on the agenda of building a nation.

If the pintail, the mallard, the teal, the shoveller and the goose were not winter visitors to our land, we'd soon be a vast burial ground for the birds of the air.

These birds go back to Siberia, before it gets too hot for them, in more sense than one.

Nature in her great wisdom made them allergic to the heat. And so they come to visit us and leave again. Nevertheless, in Uttar Pradesh, the netting of geese on a large scale, takes place each winter, with the birds railed to Calcutta for sale.

But where is the tiger to go? He left Manchuria quite a while ago and is now a native of our land, holding an Indian passport. As a citizen of this country, he has the right to be

us and leave again. Nevertheless, in Uttar Pradesh, the netting of geese on a large scale, takes place each winter, with the birds railed to Calcutta for sale.

protected. And this goes for the panther, the sambhar, the cheetal, the little 4-horned antelope and all their friends of the forest.

Take a look on the inside cover of your passport, where you'll see the words:

"These are to request and require in the name of the President of the Republic of India, all those whom it may concern, to allow the bearer to pass freely without let or hindrance and to afford him or her every assistance and protection of which he or she may stand in need."

Beautiful words. And when the inhabitants of our forest ask us, what do they mean, what shall our answer be?

I too have been guilty and I come here a penitance. But the trigger-happy have to be taught, educated, brain-washed. Throwing the book at them is not enough. Drama, spectacle, visual aid, movie and projector must all be harnessed to spread the gospel of the preservation of wild life. We need a Peter Scott to rouse the conscience of our nation, of our Government. The teaching must be to the heart as well as to the intellect. We don't have to justify the preservation of wild life, with the argument that it can bring in the shekels.

But if Government is impressed by the financial benefits, let them send representatives to East Africa to realise how much tourist revenue the Government of East Africa earns from tourism, and the major portion of this revenue is due to the wild life of Kenya. Representatives from the Department of Tourism, and the Department of Food and Agriculture, should be sent to Nairobi, to spend a day at Tree tops, Nyeri, 120 miles from Nairobi. There is an excellent road to Tree tops. A small hotel with excellent facilities is built on stilts, nestling against the trunk of a magnificent tree.

Tree tops does a roaring business each day of the year, with their 25 add rooms, excellent food, hot and cold and a fine bar.

A large water-hole situated in front of the Tree is impregnated with cobalt and other mineral salts, and has a great attraction for wild animals.

First come the baboons around 3.30 in the afternoon, and this is referred to as the Baboons Tea Party. Then come small game to the water, followed by the wart-hogs and the fierce wild buffaloes, and then the rhinos, and finally, the elephants—father, mother and little jumbos, having a wonderful time, depositing tremendous mouthfuls of the mud into their own open

mouths, with the mother feeding their little ones. A wonderful human sight, and one that never fails to thrill the tourist who comes to Tree tops from all over the world.

Can we not display similar imagination, ingenuity, in view of what Nature has bestowed upon us ?

Then there is the Princess Elizabeth Wild Game Sanctuary in Nairobi itself. One cannot conceive of a more pleasant way of spending an hour or more driving through the park in the softness of the evening, sitting in your car, with a grand stand view of the wild life of Africa.

Rhodesia, in Central Africa, has its Kruger Park, another great sanctuary of wild life and a great tourist attraction.

There is no point in our government opening a series of sanctuaries, if no action is taken to prevent murder within them. How can a sanctuary become a tourist attraction if it resembles a botanical garden—an abundance of trees, but no animals.

India sees 179,000 tourists each year. If some of them could be persuaded to spend just one day in the jungles, seeing our game in deluxe and more modest accommodation, with sight-seeing trips in the forests, I don't have to tell you what the benefits will be. And if all the world loves a zoo, what an attraction a night in the jungle would be. Hongkong, Tokyo, Honolulu, Rome, Paris, London and New York can't produce a night in a jungle, we can—but what are we doing about it—precious little.

If our beloved wild game must have a financial reason for survival, surely this is one. Excellent accommodation, suitable vehicles, good food, wine and moon, as successive groups spend just one day in exotic surroundings.

Few nations on earth can offer a dusk or midnight drive through the forests of the night. Your headlamp and your eyes reveal a giant stage, displaying what Nature never meant you to see.

What a tremendous brochure it would make—a night in a real jungle—not a Tarzan movie. But when will it ever be!

The substandard, amateurish, boarding house arrangements for visitors at Kana Kesli are no substitute for showmanship. But we'll talk and talk and talk—till the cows come home—that is, if *Panthera tigris* doesn't grab them and lo—another cattle lifter will be born. God keep him!

Seminar on Wild Life

The Ministry of Food and Agriculture, Government of India organised a seminar on Wild Life at Delhi in November, 1965 in which an international delegation of International Union for Conservation of Nature headed by Professor F. Bourliere participated. It was presided over by Shri Shah Nawaz Khan, Deputy Minister of Agriculture. The Indian delegation consisted of officers of the Ministry of Agriculture, members of the Standing Committee of the Indian Board for Wild Life, representatives of voluntary organisations in the field of Wild Life Conservation, and eminent wild life enthusiasts. His Highness Maharaja Sir Pratap Singh of Nabha, a member of the Indian Board of Wild Life and President of the Wild Life Preservation Society of India attended as the Regional Secretary of I.B.W.L. for North India. The Wild Life Preservation Society of India was represented by Shri S.S. Negi, Senior Executive Vice President and Dr. R.N. Misra, Honorary Secretary of the Society. There was a pleasant exchange of ideas on the subject.

Mr. Peter Scott spoke on the aesthetic and cultural side of wild life. Dr. Salim Ali read a paper on birds and agriculture and Professor Bourliere on the scientific aspects of wild life conservation. Mr. S.K. Kooka spoke on the importance of Wild Life from the point of view of tourism. Dr. R.N. Misra pleaded for protection to wild life outside Government forests and Shri Zuffar Futehally spoke on the role of voluntary bodies in arousing interest in wild life. In the evening a meeting was organised at which Prof Bourliere and Mr. Peter Scott spoke and Mr. Ashoka Mehta presided and spoke on the socio religious background of wild life preservation in ancient India, and our attitude towards wild life. After the meeting there was a dinner at the India International Centre in honour of the members of the International Delegation. The dinner was sponsored by five voluntary associations in the field of wild life preservation—the Bombay Natural History Society, the Wild Life Preservation Society of India, Delhi Bird Watching Society, the Bird Watchers Field Club of India and the Indian Ornithological Garden.

The visiting team was taken to Keoladeo Ghana Sanctuary in Bharatpur by Shri K.S. Shankhala, Director Delhi Zoological Garden on the following day and returned with high praise for the sanctuary as being one of the best waterbird sanctuaries in the world. Mr. Peter Scott on return remarked that during the short visit the team had seen as many as 135 different species of birds. It was suggested that one of the Universities adopt the sanctuary as a special field for scientific research.

On their return from Bharatpur the visiting team was given a cocktail party by His Highness Maharaja Sir Pratap Singh of Nabha at his residence. The party was most successful, a few hundred persons attending and it provided an informal opportunity for personal contacts and exchange of information on wild life and related problems.

For the Record

Sixty six years ago the passenger pigeon of north America passed into history, with the killing of the last recorded bird by a schoolboy with B.B. shot. Thus was added one more to the list of several hundred species which have become extinct through the greed of man. The process of destruction was a ghastly one and, in many respects, a blacker record on the conscience of early America than the destruction of the vast herds of bison which once roamed the prairies.

Moving in great swarms that seemed to darken the sky and capable of flying for twenty hours on end and at speeds of upto ninety miles an hour, the flight of the pigeon hordes sometimes took three days to pass a given point. When they settled down to feed or to rest their accumulated weight broke branches and brought down dead trees ! Their nesting colonies spread out over many square miles.

The pigeon's gregariousness and its flock instinct was the most powerful factor which led to its extinction, for while it was on the ground it could be easily destroyed by trapping, bludgeoning and shooting. Every part of the bird was considered of value: the meat for eating, the feathers for mattresses and pillows, the gizzards and stomachs as curatives for gallstones and dysentery respectively. People flocked to nesting sites to 'hunt' them. In one, three week period 5,000,000 passenger pigeons were wiped out at a single nesting site. A single blast from a shot gun brought down 187 birds. They could be brought down with sticks and the young were burnt out of their nests with fire !

As their numbers decreased their will to live declined. The species gradually came near to what is called the 'extinction threshold'—nests would be deserted and new-laid eggs would remain unattended. Finally the survivors refused to nest at all. The last captive pigeon died in 1914, at the age of 29 and is preserved in the Smithsonian Institute, Washington, a mute reproach to man's greed !

The story has a lesson for us here in India. Within living memory the Indian cheetah has become extinct, removed from the scene by both destruction of its habitat through spread of cultivation and settlement in the drier tracts of India and man's decimation of its natural prey the black buck, by ruthless shooting. This passing of a beautiful and harmless animal, which could, moreover, be harnessed for the pleasure of man in stalking and bringing down black buck for its master, as was once the sport of such persons as the Maharaja of Kholapur and other Deccan princes, went almost unnoticed. During the British period and before the emergence of a national consciousness in these matters of protection of the native species, no one cared very much about the fauna of the areas which did not form part of the reserved forests, although in the latter the rules of the Indian Forest Act were strict and fairly well enforced, thanks to the edifice of forest administration set up by the British. But the case is very different now—or should be.

Yet what is the record? In areas which are not reserved forests or sanctuaries it is a case of what is 'everybody's business is no man's business.' The existing law (if anyone cares to remember it!) the Wild Birds and Animals Protection Act, is a dead letter. Only in the Punjab, where from a long time there was control of shooting in the areas outside the reserves under an act and by a department other than the forest, was there any attempt to conserve game in the countryside as such. In the erstwhile Bombay State an attempt and for the record an early attempt, as far back as the 1950s—was made to modernise the legislation by a comprehensive act. People at first laughed at the severity of its provisions: it would be difficult to keep even a tame bulbul so long as the proposed Bombay Act is there, said some cynics! Yet the Bombay wild life conservationists, spearheaded by the Bombay Natural History Society, put through an act which controls hunting and traffic in wild birds and animals in *all* areas of the State, reserved forests and otherwise. Under its provisions the inflow of game birds to the city of Bombay and the tables of its restaurants is controlled, the encouragement to trafficking in trophies is checked. The U.P. authorities will note this, it is hoped, in relation to its provision against snaring game birds in the State and the easy availability of partridges in the restaurants of such cities as Meerut; and Madras and Mysore the export racket in snake and tiger skins, the latter of animals said to be killed by villagers with the pesticides so liberally supplied to them!

Today the Great Indian Bustard is on its way out. In the desert country of Jaisalmer, Rajasthan, where they were once plentiful, they have been almost exterminated by ruthless hunting, often from vehicles. It has been alleged that men of the armed services shoot the bird with service rifles! In the Western Ghats country and the Nilgiris such species as the Mouse Deer, the Malabar Squirrel, the Nilgiri Black Langur and the Lion Tailed Macaque

are now becoming extremely rare. All of these species share the comparative protection of the heavy forests of the reserves and the vulnerability of the more open jungles on the outside, where they can be shot freely. Some of them are on the protected list, yet what is the record? They are gradually vanishing, thanks to the indifference of the public and the apathy of the authorities. Of the latter, the forest authorities, while spearheading the conservation movement everywhere (as is but to be expected) cannot be held responsible for what goes on in the areas outside the reserves. Unless an organisation like the Punjab Game Department and an act like the Bombay Wild Birds and Animals Protection Act are put through in every state of India, species will continue to disappear and the record will continue to be black!

P.D.S.

The Voice Crying in the Wilderness

T. ANGAMI

The voice crying in the Wilderness in the days of John the Baptist was divine, revolutionary, today the voice crying in the Wilderness is less revolutionary but no less divine. Nature has a value, it has a value not in terms of man's money or of his granary, but in terms of outlooks and attitudes. It widens our horizon, heightens the nobler sense of value, refines the spirit and increases the dimensions of our attitudes. The level of our sense of value and the dimensions of our attitudes determines the kind of man and woman we are and the kind of man and woman we are determines the quality of a people and the quality of a people determines the quality of a nation. Across the ages nature has influenced man in an immense way. The lofty mountains, the grandeur of hills and the splendour of valleys have always made strong impressions on the minds of men. It has produced lofty minds, immortal art, and immortal poetry and the combinations of these have enlivened the life without measure. Unluckily today, this voice crying in the wilderness is not well received in this indifferent noisy world.

The uninformed liken it to wild and the abode of all unrighteousness, the half informed enjoys it, but think it anybody's property and hence not their concern for its upkeep. True, nature is sometimes wild and uncomfortable, at times even cruel but to confine the vision of nature in these low limits is to completely refuse its overwhelming blessings and hence a most

unlucky thing. The beauty of nature is not immediately discernible and hence its values are not easily appreciated, but like art and music the values of nature rise above all terrestrial measurements and then from there it brightens the life. Tree means moisture, moisture means water, water means bread and bread means LIFE !

The pressures of day to day life in this civilization is increasing, the civilization's evil by-product—Nervous Tension is on the increase, and to escape this, today, more and more people are seeking solace in green nature. These are simple families seeking a peaceful weekend to themselves and these are the simple common people, the humanity crestfallen and weather beaten and seeking that illusive 'peace of mind'. If man needs nature today, he will need it equally tomorrow. The pressures of this life in our children's time and in our children's children's time will increase and if man seeks solace in nature today, he will seek it equally tomorrow. Therefore if we are fair, if we are far sighted, if we love our children, if we are concerned about their welfare, the preservation of nature should receive its due share of our concern.

The coming decades will find man producing fantastic rockets, compounding life sustaining pills and even begin to invade the kingdom of space but without nature man shall still be sad and he shall lament: "How Green Was My Valley".

NEWS & NOTES

Kaziranga (Assam)

News has been received of the results of the census of population of wild animals in Kaziranga Sanctuary, sponsored by the Forest Department and conducted by an American expert, helped by over two hundred Officers and men of the Forest Department. A U.S. television company has shot a full length film on the operation.

The census was done on the principle of actual verification. The Sanctuary 169 sq. miles was divided into eighteen compartments for the purpose of census: and the operation carried on on the 16th and 17th March, 1966 revealed the existence of over 1,000 hog deer, 400 buffaloes and 400 elephants. The rhino population was three hundred and sixtysix. This is the first official census of the area. A detailed report is awaited.

A census of wild life in Senchal Sanctuary near Darjeeling has been recently carried out revealing a large population of barking deer. A detailed report is awaited.

A tiger is reported to have killed a wild elephant in Kalagarh Forest Division of Uttar Pradesh during June 1965. Such instances are most unusual and should be carefully looked into.

Letters to the Editor

Dear Sir,

I have just (January 18th) received my October 1965 copy of 'the Cheetal' which I read, as always, with great interest and am stimulated thereby—on the ninth successive day of hard frost and snow—to make a few comments.

Our Indian wild life is, to all intents and purposes, in the hands of the forest department, and let me say at once that they are doing a noble job in preserving India's forests from the encroachments of civilization as much as possible.

But so far as the conservation of wild life is concerned, as is pointed out by the letters, in your October issue, of Messers Arjan Singh mainly about animals and birds and R.D. Singh about fishing licences they are, apparently, still making the mistake of restricting the activities of sportsmen, particularly those of moderate means whenever they decide to strike another blow for wild life conservation.

I have now lived for nearly thirty years in this country and in that time have come to the irresistible conclusion that, considering the industrialisation of the last two centuries and the more recent intensification of agriculture, all wild life would have been exterminated in Great Britain long ago were it not for the efforts of the sportsmen, so often castigated both here and in India as enemies of wild life conservation.

There are very vocal 'anti blood-sport leagues' in this country who occasionally come to actual blows with the hunting fraternity who hunt the red deer and the fox. But the people who are successfully conserving these two first members of our British fauna are not the 'leaguers' but the object of their tirades and demonstrations the huntsmen. Without the hunting of the red deer with horse and hound in Devon and Somerset the local farmers would have exterminated them by shooting years ago. As it is the hunting keeps their numbers within limits acceptable to agriculture and the farmers themselves join the hunts. In Scotland where the red deer are conserved for the skilful and exacting sport of 'stalking' by private landowners the same thing would have happened: the red deer would have gone the way of his near relative, the Kashmir Stag. The red fox can be an unmitigated nuisance to poultry farmers, but nowadays poultry pens can easily be made 'fox-proof', and 'Reynard', who would otherwise have been exterminated by shot guns and traps, is

certain of his survival thanks to the men in pink coats who hunt him and not to the 'Leaguers' who oppose hunting.

It is the same with our game-birds. The pheasant, the partridge and the red-grouse— a species only found in the British isles—will continue to exist as long as there are land-owners who continue to preserve them for sport. Otherwise disease through overcrowding and other causes and indiscriminate slaughter for the market would have signed their death warrant years ago.

In India it is, unfortunately, a different story. We talk gloomily about our vanishing wild life and in the same breath discourage those who are most anxious to conserve it. We do very little to discourage poaching, but we certainly discourage legitimate sport. I learn for instance that in the Dehra Dun forest division the Forest Department have forbidden the use of beaters for shooting jungle fowl. May I ask them very respectfully how they expect us to shoot them? Jungle fowl forest is generally too dense for us to 'walk them up' as we would partridges, and if 'walking up' were possible the birds would either run ahead of us or get up out of range. We may, of course, drive along the forest roads in a car and shoot them as they sit on the road picking up cow-dung. Is that sporting? Or we may sit in a tree on the edge of the forest and shoot them on the ground as they come back from their foraging in the cultivation. This is nothing less than poaching, to my mind. Still worst, we may 'bait up' a likely spot by scattering grain, sit in a 'hide, and refrain from firing until we are certain of getting at least three, on the ground, with one shot. Do the forest department expect us to accept these very unsporting ways of shooting jungle fowl? They demand no skill with the gun at all. Skill with the gun means birds in the air and the only satisfactory way of getting them in the air is by beating them up to the gun or guns. I suppose that the main reason for the ban on beating for jungle fowl is that it 'disturbs the jungle'. But I don't think that beating for tiger is banned, nor for deer though there are very strong arguments for banning beating for all hoofed game. Moreover a few jungle fowl beats do not disturb the jungle—mostly scrub jungle—half so much as the prodigious grazing that is permitted, or the felling of trees.

This brings me to another point—Sanctuaries. Most sportsmen are wholly in favour of Game Sanctuaries, always provided that they are Sanctuaries in more than name. But the Forest Department are determined to extract the last rupee that the forest can yield, and are unwilling to forego the grazing fees and the extraction of timber even in Sanctuaries. But a Sanctuary for game means that the animals and birds are not only not shot out but not harassed, nor should they be deprived of their natural food by grazing of almost

worthless cattle. Moreover the many Himalayan Sanctuaries are almost unsupervised, and become in next to no time Sanctuaries for poachers who thrive under these conditions unharrassed by the activities of forest guards stirred into activity by the legitimate sportsmen who have paid good money for their licences.

To revert to the red jungle fowl for a moment. When were they most abundant, at any rate in the Duns? I suppose in the first thirty years of the century when far more shooting permits were issued far more cheaply and when cartridges were eight rupees a hundred, but when poaching was really firmly controlled. Today there are far fewer permits but far more poaching. I am told that in one division not only is small game shooting only permitted for fifteen days in the month, but the number of birds per gun in that period is restricted to twenty. This means that if you were able to shoot on all fifteen days your permitted bag per day would be one and a quarter jungle fowl. A jungle fowl enthusiast likes to make a day of it. He has got to pay his beaters a day's wage in any case. In this time—two or three hours before lunch and two afterwards—an average shot, if birds are fairly plentiful, will hope to shoot at least ten birds. Thus under the new regulations he will only be able to enjoy two days shooting in the month, for which he pays vastly more than he used to when there was no limit to the bag.

How is it that the more restrictions are placed on legitimate shooting the fewer the birds?

As to fishing, the object, surely, of fish conservation is not solely to attract millionaires from America but (a) to increase the protein food available for the people and (b) to introduce a healthy and rewarding sport to as many as wish to take it up. In Great Britain fishing has from the very beginning been a sport indulged in by all the people. Even 'game fish', by which we mean trout and salmon are now no longer the preserve of the rich man but are available to all classes of the community for very reasonable fees. India possesses a magnificent 'game fish', the mahseer and an increasing number of enthusiastic anglers drawn from the artisans and the peasants as well as from the more well-to-do. But not only is it becoming more difficult and more expensive to get a day's legitimate fishing, but nothing is done—or pitifully little—to stop illegitimate methods of taking fish by bombing, poisoning and unrestricted netting, methods which are in the course of defeating even the wider object of conservation—to provide more food for the people. I cannot see how bombing and poisoning, killing as they do the immature along with the mature, can help conservation. If the Forest Department will unbend a little towards the angling fraternity in the direction

of providing them with good fishing on reasonable terms they will find them very willing allies in the task of conservation.

Yours etc

R. S. Holdsworth,

Blagdon Hill, Somerset.

* * * * *

Dear Sir,

Apart from this, I feel that over the past years, great emphasis has been placed on a drive to educate the youth in the cause of wild life preservation. Somehow, I feel the problem might have been better tackled, had a priority been placed on the education of the adult population in wild life preservation. After all, there is little profit if Master 'X' is a keen preservationist while Mister 'X' is the town's most notorious poaching slayer. It is easier for the son to follow in the footsteps of his father, rather than adhere to the doctrine prevalent within the walls of his academic institution.

Finally I wish to express, there ought to be a common system throughout the country for obtaining permits and licences to do an honest and legitimate bit of shikar. At present, the majority of procedures are so heavily laden with 'red tape' and the lack of guidance is evident. This has resulted in some shikaris resorting to the simpler procedure of taking a risk, and going out without authorisation. If they are caught, they resort to "squaring" the very under-paid authorities, who cannot afford to ignore the prospect of gaining a few extra rupees, which are higher stakes than repute and service record. I suppose it is well to have obstacles in the growth of the numbers of shikaris. The measures which are a natural deterrent at present are, the shortages of ammunition, the non-availability of sporting weapons, and the prohibitive price of petrol. But, since shikar is a sport which can be indulged in by a number of the financially privileged, why should they not be made to stick to the ethics of the sport! Why must their hands be forced into resorting to malpractice! The question of making information easily and readily available, the assistance and guidance which the authorities ought to provide to shikaris, should all be easily and openly available. I feel that sporting licences ought to be procurable at many centres, for example, Post Offices, Tourist Centre Offices and suchlike, and not ONLY at the office of the Forest Department. Invariably, the incumbent authorised to issue a permit is away on inspection tour in the district. This can be very frustrating to a genuine shikari who often has a limited time at his disposal to go

out on shikar, and not have to spend days trying to obtain a permit. The present day clutter-up of affairs and the uncertainty of leave do not allow plans to be made ahead. In any case, information on blocks and areas is so out-of-date and sketchy, and then it is only allowed to be passed on by the highest office. It is such receptions that disgust a genuine sportsman, and force him to resort to the easier method of doing wrong. I feel it is the duty of those responsible to HELP and not HINDER.

I do think that something ought to be done in this regard, as it only ONE aspect which pertains to the achievement of the aim of our society—The PRESERVATION OF WILD LIFE.

I remain,

15, Langford Gardens,
Bangalore—25.
March 6th, 1966.

Yours faithfully,
G.H. Scott, Major.

NEWS & NOTES

Fight to Preserve Wild Life

Well-known comedian Spike Milligan writes in The Observer: "The fight for wild life is no crank's struggle: it is as much a battle to save man's morality as it is to save the world of animals he is constantly destroying. Don't wait. Do something now, otherwise future visits to the zoo will be to see the plastic elephants. Come and pop the inflated rubber hippos; see the radar controlled wooden pelicans".

If we do not call a halt to killing wild life then one day we may destroy the whole natural life around us; destroy the refreshment and regeneration it gives, and so destroy ourselves.

How They Do It Elsewhere

U.S.A.

In a National Park in the United States of America in March 1966 a Wild Life Warden successfully gave artificial respiration to a bear shot with a tranquiliser gun. The bear had earlier clashed with a porcupine and the warden was removing porcupine quills from the paws and body of the bear when the bear's heart suddenly failed.

(A.I.R.).

United Kingdom

Under the new Fire Arms Act in the U.K., trespassing with a fire Arm on private land without reasonable excuse now carries a maximum penalty of three months imprisonment and/or a fine of £ 100/-. It is also an offence to have a loaded air gun, shotgun or any other loaded or unloaded fire arm in a public place including foot-paths and bridle-ways without reasonable excuse. It is hoped that the Act will make it possible to curb the indiscriminate shooting of (and at) wild birds and animals.

Do we not need a similar Act in India ?

IN MEMORIAM

The Pinkheaded Duck—*Rhodonessa caryophyllacea* Hindi Gulab-Sir

Pinkheaded duck painted by M. J. S. Mackenzie and printed on the cover is as big as a domestic duck. The Drake is blackish brown above and below with a light pinkish buff speculum prominent in flight. The head is partially tufted bright pink and bill is also pink. The underside of wings are shell pink. The duck is dull brown with pale brownish buff speculum. The head is suffused with bright pink but the pink area is not as sharply defined as in drake. It has a long thin neck with gradual slope of forehead. It used to be found in pairs and small flocks of 8 to 30 on wooded jheels. It was found in the swampy jungles of Himalayan Terai from Nepal to Assam, Manipur, and East Pakistan. Occasionally found as far south as Nellore (Andhra) and Jalna (Maharashtra). It was last authenticated and recorded in Dharbanga District (Behar) in June, 1935.

Since 1956 its killing or capturing is totally banned by law, but possibly its place is with the DODO now—and to follow there may be the Chir and the Monal Pheasants, not to mention other animals.

Book Review

The Book of Indian Animals. By S.H. Prater, Second (revised) edition, 1965 (Bombay Natural History Society and Prince of Wales Museum of Western India, Bombay), xxii + 323 pp, 28 col. pls (138 sp.), 41 monochrome pls. Price Rs. 30.

The first edition (1948) of this book was a very important event in the history of popular works on Indian Mammalogy and was quickly sold out. The second edition was long overdue and has now beautifully been brought out posthumously. Although the text was thoroughly revised by the author, a good deal of subsequent useful improvement has been done by the publishers with the help of a number of competent workers.

There are twenty three chapters. The first gives a brief general account of mammals while others deal with various groups of India mammals, describing in detail important species with a separate general account for each group. Bibliography and index are provided. The highlights of this remarkable new edition are: much better and more numerous coloured illustrations drawn to a scale by Paul Barrual, a new chapter on marine mammals, upto date nomenclature, metric measurements in addition to original English ones, names of all Indian races of fully described species, better printing and presentation.

A few minor slips casually noted are as follows : The description of *Presbytis geei* (p. 42) is rather inaccurate. The species has two colour phases, creamy white in summer and golden red in winter. The tail on the average is similar to that of the allied species, *Presbytis pileatus*. It has a number of other important distinguishing characters (*Ann. Mag. nat. Hist.*, 9 (12), pp. 86-88; *Rec. Ind. Mus.*, 58 (2), pp. 123-130). Absence of the detailed description of the important species of bats. The description of the Order Insectivora as insect eating mammals (pp. 10, 164). Remarks on speciation (p. 21) are not inclusive. That flying foxes 'fan' themselves because of heat (p. 180) is an error. Additional information in cases where considerable further work has been done since the publication of earlier edition, e.g., bats, primates, rodents, several larger species, was desirable. Absence of any reference to such popular topics as the snowman and the white tigers. In illustrations there are some inaccuracies regarding general colour and external features, e.g., general colour and form of hair growth on the head of *Presbytis geei* (pl. 11); colour of hair at the tail tip of *Tatera indica* and that of its facial markings (pl. 45); absence of claws on the feet of the Cheetah (pl. 18); size of *Macaca silenus* (pl. 10), etc. In the index there are commissions

particularly of forms mentioned in the general account of various groups. Some of these forms are included in the index while others are not.

Some suggestions on the further improvement of this otherwise excellent work are : The plan underlying the arrangement of various chapters needs explanation. There are still some loopholes regarding uniformity in the treatment of various species/groups, *e.g.*, descriptions of *P. geei* and small rodents (pp. 207-212), omission of the descriptions of species of bats, remarks of the classification of various groups, etc. More photographs, preferably in colour, of animals in their natural surroundings should be included. Insertion of illustration in the text can be improved so that they are as near their descriptions as possible. Picture on the cover should be of some more magnificent species of which there is no dearth.

The volume is remarkably free from typographical errors, one casually noted is the use of the definite article with the word "Cats" (p. 47) but not with other similar headings. The get-up is nice and the price is very reasonable. It is undoubtedly a superlatively useful contribution to the cause of India's wild life and every one associated with its production deserves the warmest felicitations.

H. Khajuria

The World Wild Life Fund

The Fauna Preservation Society and the World Wild Life Fund announce the setting up of a joint Revolving Fund for urgent projects of Wild Life Conservation. The F.P.S. is setting aside £5,000 out of its capital to this end and the World Wild Life Fund has agreed to replenish the fund as and when money becomes available. Both the F.P.S. and W.W.F. hope, however, that others will come forward and subscribe towards the cost of the various projects to keep the Fund revolving, so that more of the many urgent projects awaiting their turn can be tackled quickly. All too often speed is essential for success. In fact the Fund has already begun to revolve, for donations of £100 from Brook Bond Tea Ltd. and £25 from the St. Hubert Club, have been promised towards the cost of the second project listed below, to save the Persian fallow deer.

The first three grants for the Fund will be:

£3,800 to provide equipment urgently needed to help to save the rarest large animal in the world the Javan rhino. Latest estimates suggest that not more than 40 Javan rhinos may survive, all in the Ujung Kulon reserve in western Java. The equipment needed, a motor-boat and a hut and mooring, will be used by the Swiss scientist, Dr. Schenkel, who is undertaking an ecological survey of the reserve, arranged by the Survival Service Commission of the international Union for Conservation of Nature.

£ 800 towards the cost of capturing a stock of the rare Persian or Mesopotamian fallow deer, to breed in captivity. This has already been done with the Arabian oryx, now established at the Phoenix Zoo in Arizona. There may be no more than 50 Persian fallow deer left and the valley woodland in which they live is being steadily destroyed, so that unless a breeding stock can be established in captivity the species is likely to become extinct.

£ 400 towards the cost of making a survey of the distribution of the second rarest rhino in Malaya, to be undertaken by Mr. David Strickland of the University of Kuala Lumpur. Only 100-150 of these rhino are believed to survive. Next to nothing is known of its detailed distribution, and this knowledge is essential for its protection:

This joint venture brings still closer together two bodies which for sometime have been working together in the field of wild life conservation, the Fauna Preservation Society, founded in 1903, and the World Wildlife Fund, founded in 1961. Peter Scott, who is First Vice-President of the World Wildlife Fund and Chairman, of its British National Appeal, is also Chairman of the Council of the Fauna Preservation Society; the Marquess of Willingdon, who has for many years been President of the F.P.S., is also a Trustee of the British National Appeal of the W.W.F., and Mr. Ian Malcolmson, for many years Hon. Treasurer of the F.P.S. is now Chairman of the Finance Committee of the British National Appeal of W.W.F.

Further information from:

1. Richard Fitter, Fauna Preservation Society, Jun, 0872 or Kingston Blount 223.
2. Ian MacPhail, World Wildlife Fund, Sul 5511 or Mia 3535.

यह दिलचस्प दुनियां

जवाहरलाल नेहरू

आसाम में एक जंगल है जिसे सैक्चुअरी कहते हैं, मैं गेडों को देखने गया। वह खास आसाम का जानवर है। अजीबो-गरीब जानवर है वह। उसको देखकर भी यकीन नहीं आता कि यह सामने है क्योंकि वह इस दुनिया से कुछ ताल्लुक नहीं रखता। जब मैं खुद कालेज में भू-गर्भ शास्त्र पढ़ता था तो जियोलोजी में पुराने जमाने के जानवरों की बनी हुई तस्वीरें देखता था। कुछ वैसा ही जानवर है वहाँ तो बार-बार मैं उसे देखूँ, तब भी यकीन न आये कि यह असली है कि नकली है। निहायत बदशक्ल जानवर है। मैं आपसे पूछूँ कि आप में से कितने मामूली जानवरों को छोड़कर और जानवरों को पहचानते हैं या उनके नाम तक जानते हैं? आप कितनी चिड़ियों के नाम जानते हैं और उनके गाने को सुनकर आप में से कितने लोग यह बता देंगे कि यह कौन सी चिड़िया है। आप में से कितने हैं कि जो तारों को पहचानते हैं? कितने हैं जो दरख्तों को पहचानते हैं? कितने हैं जो फूलों को पहचानते हैं? आप खुद अपने से सवाल कीजिये। कुछ न कुछ तो सब जानते हैं, मगर वह बहुत कम है।

पहाड़ों से ऊपर उड़ती हुई चिड़िया

एक दफे मैं गर्मियों के आखिर में अल्मोड़ा जेल में था और अल्मोड़े में बहुत चिड़ियाँ आती हैं। कहाँ से—रूस से, साइबेरिया से, जर्मनी तक से वहाँ चिड़ियाँ आती थीं, पहाड़ों के ऊपर से उड़ती हुई और फिर सर्दी के खत्म होने पर चली जातीं। उनके भुण्ड के भुण्ड आते हैं। तो मुझे उनमें दिलचस्पी थी। अल्मोड़े में एक किस्म की चिड़िया कभी-कभी आती थी। वहाँ मैंने एक शख्स से पूछा कि, “भाई तुम यहाँ की कुछ चिड़ियों को पहचानते हो?” उन्होंने कहा, “जी हाँ, कौवे को पहचानता हूँ।” आमतौर से हमारे देश की हालत यही है कौवे के अलावा मुमकिन है आप दो एक और परिन्दों, यानी, तोता-मैना को पहचान लें, लेकिन इससे ज्यादा बढ़ने में दिक्कतें पेश हो जायेंगी। क्यों क्या बात है? आप यूरोप में किसी स्कूल में भी जाइए, वहाँ आपको बच्चे पचासों चिड़ियों और जानवरों के नाम बता देंगे। इनमें उन्हें दिलचस्पी है।

दुनियां में दिलचस्पी

चिड़ियों के नाम जान लेने में कोई खास खूबी नहीं है, लेकिन इस माने में इसमें खूबी है भी। यानी आपमें देखने का और समझने का माद्दा बढ़ना चाहिये और चारों तरफ की दुनियां में दिलचस्पी लेनी चाहिये। इसी उम्र में आपको अपनी अहसास करने और समझने की कुब्बत बढ़ानी चाहिए। यह जो दुनिया,

बाहरी दुनिया है उसे देखने की ताकत बढ़ाइये और अन्दरूनी तीर पर देखने की ताकत भी। अन्दरूनी दुनिया के मामले में हिन्दुस्तान में कम से कम चर्चा बहुत होती है। पहुंचते कहां तक हैं, यह मैं नहीं जानता। अन्दर से बढ़ना यानी रूहानियत बढ़ाना, बहुत जरूरी चीज है। लेकिन अक्सर मुझे शक होता है कि इसका चर्चा ज्यादा होता है, उसके पीछे काम कम होता है। खैर वह तो जरूरी है ही। लेकिन मैं दूसरी बात आपको बता रहा हूँ। आप कुछ बाहर से भी बढ़िये, आपकी आंखें खुलें, आपको इस अजीबो-गरीब दुनिया में दिलचस्पी हो। इसमें जानने की बेगुमार बातें हैं।

साल डेढ़-साल के लिए अल्मोड़ा जेल में मैं एक बहुत छोटी सी जगह में रहता था। एक कोठरी थी और उसके साथ चार-पांच या दस फुट की जरा सी कच्ची जमीन थी। जाहिरा कोई दिलचस्प बात वहां नहीं थी। लेकिन रहते-रहते मैंने वहां कितनी ही नई चीज देखीं, जो मैंने पहले कभी नहीं देखी थीं। चाहे वह कीड़ों की किस्में हों, या कोई फूल हो। वहाँ कुछ बहुत छोटे फूल होते हैं, जिन्हें शायद कोई देखता भी नहीं लेकिन, चूंकि मुझे कुछ करना नहीं था, मैं एक-एक चीज को वहां पहचानने लगा था। अगर छत में एक जरा सी भी निशानी है तो वह भी मैं पहचानने लगा था। मैं जानता था कि मेरे कमरे की छत में छिपकली कहां रहती है। वहां भिड़ों के कई छत्ते थे, उनसे भी मेरी दोस्ती हुई और मैंने उनकी जिन्दगी को समझने की कोशिश की।

कीड़े मकोड़े भी महत्वपूर्ण

एक दफे मैंने वहां एक बड़ा भयानक युद्ध देखा। सामूली भिड़ों में और बरों में लड़ाई हुई। कभी आपने देखी है उनकी लड़ाई? बहुत ही जबरदस्त लड़ाई थी साहब, और बहुत बेरहमी से लड़ी गई। लेकिन मैं क्या करता? जाहिर है कि बरें बहुत जबरदस्त होती है। उन्होंने भिड़ों को खत्म कर दिया, बिल्कुल नेस्तोनाबूद कर दिया। मैंने उनको बचाने की बहुत कोशिश की, लेकिन मैंने बाद में यह सोचा कि यह तो फिजूल बात है। मैं कहाँ तक इनकी कौमी लड़ाई में पड़ूँ।

मेरा मतलब यह है कि चूंकि मैं वहाँ रहने के लिए मजबूर हो गया था, तो मैंने वहाँ पर हजारों नई बातें देखी, जो मैं साधारण तौर से शायद न देखता। उस छोटी सी जगह में तरह-तरह के छोटे-छोटे जानवर, बेगुनाह जानवर, तरह-तरह के कीड़े-मकोड़े जिनसे लोग घबराते हैं। मैंने पहले उन्हें नापसन्द किया। मसलन शुरू में भिड़ों का वहाँ होना मुझे पसन्द नहीं आया, मैंने कहा कि गलत चीज है। बल्कि एक भिड़ ने तो मुझे काट भी खाया और मैंने जोश में आकर, गुस्से में आकर कुछ भिड़ों को मारा भी। पर बाद में मैंने सोचा इनसे लड़ाई मोल लेना फिजूल की बात है। इनसे दोस्ती करना ज्यादा अच्छा है। चुनांचे उसके बाद हममें दोस्ती रही। न उन्होंने मुझे काटा और न मैंने उन्हें मारा। और मैं वहाँ घास तक को पहचानने लगा था। कोठरी के नजदीक जरा सी जमीन पर घास उगी हुई थी। मैं जैसे इस घास के एक-एक तिनके को पहचानता था, मैं उसका बढ़ना, उसका घटना सब जानने लगा था।

दिल और दिमाग खुला रखें

खैर, यह तो मैंने आपको एक मिसाल दी। मेरा मतलब यह है कि इस छोटी सी मिसाल को लेकर आप बड़ी बातों पर जाइये। इस जिन्दगी में इतनी बातें हैं कि अगर आपकी आँखें खुली हों, कान खुले हों, दिल खुला हो, तो आप पायेंगे कि दुनिया में आप चाहे जहाँ भी रहते हों, वह एक अजीब दुनिया है। मालूम नहीं आपने देखा है कि नहीं। वाल्ट डिजने के कुछ जानवरों के फिल्मज हैं। मैंने सिर्फ एक फिल्म देखा है और बाकी सुना है कि उन्होंने रेगिस्तान का एक फिल्म बनाया है, जिसमें कितने ही बेशुमार और खूबसूरत जानवर रहते हैं। आप गालिबन दूसरी किस्म के फिल्म ज्यादा देखते होंगे, जिनमें गाना-बजाना होता है। वह भी अच्छा है, देखिये, लेकिन मेरा मतलब यह है कि कुछ आपकी एहसास की कुव्वत बढ़नी चाहिये। एक तो हम और भी एक तंग दायरे में बंध गये हैं। सियासी मामलों में कुछ ऐसे उलझ गये हैं कि हमारा दिमाग पूरी तरह खुलता ही नहीं है और हमारी आँखें यह देखने के लिए नहीं खुलती हैं कि दुनिया में क्या-क्या चीजें हैं और हम क्या हैं ?

शिकार और शिकारी

आनन्द

शिकार भी एक अच्छा शौक है। इसके लिए समय और धन दोनों ही की जरूरत होती है, विशेष रूप से बड़े जानवरों के शिकार के लिए। शिकार सभी खेलते हैं अमीर हो या गरीब। लेकिन अब यह शौक केवल धनी वर्ग के लिए रह गया है। शिकार से मनुष्य में आत्म विश्वास, धैर्य और आत्म निर्भरता आती है। जहाँ पशुभक्षी और मनुष्यभक्षी शेर, तेंदुए या घड़ियाल हों वहाँ शिकार से समाज सेवा भी होती है। जंगल में जाने से मनुष्य का शारीरिक और मानसिक स्वास्थ्य भी ठीक रहता है।

मुझे बहुत खर्चीले (राजसी शिकार) व सस्ते शिकार दोनों खेलने व देखने का सौभाग्य प्राप्त हुआ है; यह औसत दर्जे के शिकारियों के लिए है। शिकार जाने के पहले शिकारी या तो शिकारियों की बात सुनकर आकर्षित होता है या शिकारों की किताबें पढ़कर या पहली बार किसी के साथ घूमने का अवसर पाकर। उसके बाद शिकार का कुछ चस्का लग जाने पर वह बैठे-बैठे जाग्रतावस्था में शिकार का स्वप्न देखने लगता है और सोचता है कि हम भी शिकार जायेंगे तो ऐसे घूमेंगे, ऐसे जानवर मारेंगे, शेर की ट्राफी बनवायेंगे, यहाँ चमड़ा टंगेगा, यहाँ सींग वगैरह-वगैरह। मतलब वह जाने के पहले से ही एक ख्याली पुलाव पकाने लगता है। उसके बाद वह आवश्यक परमिट व ब्लाक रिजर्व कराने की कोशिश करता है और पहली बार

जब वह जंगल में जाता है तो उसे ब्लाक के आस-पास के गाँव वाले मिल जाते हैं और उनमें से कुछ लोग शिकारी बनने का ढोंग रचते हैं। उनमें से एक शिकारी बन जाता है उसके सहायक उसकी तारीफ करते हैं जिन्हें वह हेल्पर के रूप में रख लेता है। ज्यादातर ऐसे लोगों में शिकार के अनुभवी नहीं होते, केवल बातूनी ही होते हैं। और नया शिकारी जो जाता है उसके सामने बहुत से मनगढ़न्त किस्से सुनाते हैं ताकि उसे विश्वास हो जाये कि यह आदमी अच्छा जानकार और शिकारी है—क्योंकि जो नया शिकारी जाता है उसे तो कुछ ज्ञान होता नहीं इसलिए नए शिकारी को या तो किसी पुराने शिकार के शौकीन के साथ जाना चाहिए या जाने हुए शिकारी के साथ।

१. अच्छे से अच्छे मेकर की बन्दूक खरीदिए जितना कि आप व्यय कर सकते हों। मगर मेरा सुझाव है कि इसमें क़िफायत नहीं करनी चाहिए। बन्दूकों का चुनाव जगह पर निर्भर करता है। अगर आप हिमालय में शिकार करने जा रहे हैं तो एक नाली टेलिसकोपिक साइट मेगनम मीडियम बोर व एक १२ बोर काफी है। अगर आप मैदानी जंगल में शिकार खेलने जा रहे हैं तो कम से कम चार बन्दूकों की आवश्यकता पड़ेगी। एक दुनाली हैवी बोर, एक मीडियम बोर (चाहे एक नाली ही क्यों न हो), एक १२ बोर और एक २२ बोर। इतने से करीब-करीब आदमी पूर्ण सशस्त्र हो जाता है।

२. कभी भी पुराने कारतूस लेकर शिकार जाने की कोशिश न करिए चाहे कम भले ही हों मगर पुराने कारतूस से खतरा बहुत बढ़ जाता है।

३. जिन बन्दूकों को आप लें उनसे खूब परिचित हो जाएँ और पता चलाकर खूब अभ्यस्त हो जाएँ ताकि आपको यह विश्वास हो जाए कि मैं इस बन्दूक को हर परिस्थिति में चला सकता हूँ और जहाँ चाहूँगा वहाँ गोली मार दूँगा। गोकि यह विश्वास नये शिकार के शौकीन को बहुत जल्दी हो जाता है और ज्यादातर यह विश्वास जंगल पहुंचने पर गलत भी सिद्ध हो जाता है।

४. जंगल में जाने से पहले बन्दूक की सफाई व देख-रेख स्वयं करिए और जाते समय कारतूस खुद छाँटकर ले जाइए।

५. यदि आप घायल जानवर को भी ढूँढने की इच्छा रखते हैं तो जानवर के पीछे जाने के पहले अपनी बन्दूक को ठीक से देखकर और भरकर तैयार कर लीजिये तब घायल जानवर ढूँढने निकलिये। यह सोचकर कदम बढ़ाइये कि जानवर हर झाड़ी में छिपा है, निकल सकता है और मैं मार लूँगा। एक-एक कदम बड़े चौकसी के साथ यह देखते हुए कि कोई लकड़ी तो पैर के नीचे नहीं आ रही है, कोई खटका तो नहीं हो जायेगा तब कदम आगे बढ़ाइये। मेरा यह अनुभव है कि शुरू में तो लोग एक दो फर्लांग बड़ी सतर्कता से चलते हैं—खूब सोच-विचार कर पूरी तैयारी के साथ, थोड़ी दूर के बाद जहाँ थोड़ा आदमी थकने लगता है और निराश होने लगता है कि जानवर नजदीक नहीं है वहीं से ज्यादातर जानवर निकल पड़ते हैं और खतरा हो जाता है।

मैं एक घायल चीता खोज रहा था। करीब-करीब ४ फलिंग जाने के बाद निराश होकर बन्दूक तक आदमियों को दे दिया था, वैसे ही चीता दौड़ पड़ा। इसलिए जहाँ आदमी अपने को थका महसूस करने लगे और यह देखे कि अब सतर्कता में कमी हो रही है और मैं थक रहा हूँ फौरन वापस हो जाना चाहिए। वापसी में भी जब तक खुली जगह में न आ जाये तब तक सतर्कता में कमी नहीं होनी चाहिए। अगर आपने जानवर मार लिया तब तो कोई तारीफ की बात नहीं है और कहीं आप घायल हो गये तो सारी दुनिया उल्टी गाली देती है कि बेवकूफ था, बेवकूफी की। इसलिए बहुत सोच-समझकर नखी जानवरों का पीछा करना चाहिए। घायल जानवर के पीछे जाने के पहले यह कभी नहीं सोचना चाहिए कि जानवर मर गया होगा बस चलकर उठा लायें। इस ख्याल से जाना चाहिए कि जानवर बिल्कुल ठीक है और झाड़ी में छिपा बैठा है, वह नजदीक पहुंचते ही हमला करेगा चाहे वह मरा ही क्यों न हो। कभी-कभी मरते-मरते अगर आदमी वहाँ पहुंच गया तो वे हमला कर बैठते हैं।

६. अपने मस्तिष्क के सन्तुलन को किसी शिकार कैम्प के आदमी या जानवर पर मत खोइये। हमेशा खुश रहिए और आदमियों को भी खुश रखने की कोशिश करिए; रोआब-बाजी, डाँटने, बिगड़ने से शिकार कैम्प वाले अक्सर कम दिलचस्पी रखने लगते हैं और कामयाबी कम होती है।

७. शिकार और शराब को कभी एक साथ न होने दीजिए। जब शराब पी ली हो तो शिकार न जाइये और अगर शिकार जाना है तो शराब न पीजिये। दोनों एक साथ करने से धोखा हो ही जाता है। कुछ लोगों को मैंने देखा कि जब उन्हें कुछ डर लगने लगता है तब वे शराब पीने लगते हैं। यह बिल्कुल गलत बात होती है जिसे कभी नहीं करना चाहिए।

मेरे बचपन की बात है जबकि मैंने शिकार शुरू किया था—उस समय मेरी अवस्था करीब १७ या १८ वर्ष की थी—हांके में शेर निकला। मैंने ४५०/४०० से मारा। बन्दूक का कारतूस पुराना था। कुछ रुक कर फायर हुआ, गोली शेर के पिछले पुठों के ऊपर लगी। शेर की कमर पूरी तरह से टूटी नहीं, लेकिन चोट काफी आई, शेर पीछे के पैर से उठ तो जाता था मगर चल नहीं पाता था। एक दो कदम चलने के बाद ही फिर पीछे के धड़ से गिर जाता था। गोली लगते ही शेर बायीं तरफ गिरते हुये झाड़ी की ओट में हो गया। हाँका खत्म होते ही जैसे ही आदमी मचान के पास आये मैंने आवाज दी कि शेर घायल है आगे मत बढ़ो। शेर के मचान के पीछे तक जाने का खटका हो चुका था और इतना मालूम हो गया था कि शेर मचान से १०० गज पीछे तक जरूर चला गया है। हाँके वाले मचान के नीचे आकर रुक गये। नया जोश और जरूरत से ज्यादा विश्वास, जो कि नए शिकारियों को होता है, मुझे भी था। मैं मचान से नीचे आ गया और शेर ढूँढकर मारने के लिए ज्यों ही बढ़ा मेरे पुराने और अनुभवी शिकारी बिन्देश्वरी ने मुझे शेर की तरफ जाने से रोका। मेरे हठ करने पर भी वह मना ही करता रहा मगर कौन मानता है? जैसे ही मैं शेर की तरफ बढ़ने लगा वैसे ही बिन्देश्वरी ने हाँका वालों को रोका कि तुम लोग उधर मत जाओ,

मगर मुझे जाते देख हाँका वालों ने सोचा कि जब मैं उधर जा रहा हूँ तो शेर अवश्य मरा होगा, वे भी आगे बढ़े। उस समय मैं अपने को बड़ा भारी शिकारी और बहादुर समझता था क्योंकि शेर तो तब तक ४ या ५ मार चुका था मगर कभी खतरा नहीं देखा था। १५ गज के लगभग आगे जाने पर एकबारगी शेर जोर से दहाड़ा। बस, भगदड़ मच गयी क्योंकि हाँके वाले तो मरा हुआ ही समझ रहे थे। उस भगदड़ में मैं भी भागने में पीछे न रहा। जैसे ही बिन्देश्वरी के बगल से निकला जो कि मेरे पीछे-पीछे आ रहा था उसने लपक कर मेरे बायें हाथ को पकड़ लिया। कुछ देर तक मैं छुड़ाने की कोशिश करता रहा मगर वह भी न छोड़ने को तुला हुआ था और कुछ कह भी रहा था। मगर घबराहट के कारण मुझे कुछ सुनाई नहीं दिया। कुछ क्षण बाद कुछ स्वस्थ होने पर जो मुझे सुनाई पड़ा वह यह था जब मैं रोक रहा था कि उधर न जायें तब तो माने नहीं और अब भाग रहे हैं। शिकारी को कायर न होना चाहिए। उसकी बात सुनकर लज्जा सी मालूम हुई और भागने के लिए उद्यत पैर तब और भागने से रुक से गये। मगर वे तब भी बड़ी तेजी से काँप रहे थे और दिल इतने जोर से धड़क रहा था कि मानो पसलियों की हड्डियों में जोरों का धक्का लग रहा है। उसने कहा कि आप मेरे साथ आगे बढ़ें, शेर को तो मारना ही है नहीं तो कितनों को खा जाएगा। इसके अलावा अगर आप इस समय भागेंगे तो लोग क्या कहेंगे यह कहकर वह जिस तरह से मुस्करा रहा था मुझे बड़ा खला मगर अब तो इज्जत का सवाल आ गया था। इच्छा न होते हुए भी काँपते हुए पैरों और धड़कते हुए दिल के साथ बिन्देश्वरी के पीछे-पीछे शेर की तरफ बढ़ा। १० गज आगे बढ़ते ही एक आदमी को देखा—जो कि एक बहुत पतले पेड़ पर चढ़ गया था और पेड़ उसके वजन से जमीन पर लेट सा गया था। उसकी पीठ जमीन से ज्यादा से ज्यादा १ गज की ऊँचाई पर थी और वह पैर व हाथों से जोर से पेड़ से चिपका था। बिन्देश्वरी ने कहा कि यह भी आपकी तरह घायल शेर ढूँढ़ने आये थे अब हालत देखिये। इसके बाद उसकी गर्दन जोर से हिलाया तब उसने आँख खोली। बिन्देश्वरी के इशारे पर लड़खड़ाते हुए मचान की तरफ भागा। चार ही छः कदम आगे दूसरा आदमी एक खूँथ पर जिसकी ऊँचाई २ या ढाई फिट रही होगी और जिसमें दो तरफ दो नई शाखायें निकली थीं आँख मीचे बैठा था, आदमी का रंग बिलकुल काला था यद्यपि आँखें बन्द थीं, मगर मुँह खुल गया था और आगे के सफेद दाँत चमक रहे थे। इसे तो काफी देर तक बिन्देश्वरी ने हिलाया तब उसने आँखें खोली। उसे भी मचान की तरफ भगाया, तब हम लोग आगे बढ़े। उस जगह से करीब २० गज आगे जाने पर एक नाला २० या २५ गज लम्बा जिसमें खूब रेत थी मिला। ऊपर से बिन्देश्वरी ने देखा और उँगली से इशारा किया कि शेर वहाँ से पार हुआ है। मैंने भी देखा शेर के पीछे के पैर घिसटने के निशान मिले। नाले का किनारा ५ फीट ऊँचा रहा होगा जहाँ से शेर ने नाले को पार किया था वहाँ उतरने की जगह थी। एकदम चुपचाप नाले के किनारे हम लोग खड़े रहे; उसके बाद नाले के उस पार कुछ झाड़ी हिली, हम लोग चुपचाप खड़े ही रहे। थोड़ी देर में झाड़ी फिर हिली, अब तो निश्चित हो गया कि शेर वहीं है। यह बिलकुल तय था कि अगर हम लोग नाले में उतर जाते तो शेर ऊपर से भी कूद सकता था क्योंकि वह ऊपर था। दो मिनट बाद बिन्देश्वरी ने एक मोटी लकड़ी खूब सम्भाल कर फेंकी जो हिलने वाली झाड़ी के उस पार गिरी। शेर जोर से बोला और जिधर लकड़ी गिरी

थी उधर ही घूमा। हम लोगों की ओर दृष्टि न कर सका। लकड़ी दूसरी दिशा में फेंकने का अभिप्राय भी यही था। शेर का शरीर तो दिखने लगा मगर उसका कौन सा हिस्सा दिखाई दे रहा था यह नहीं मालूम पड़ रहा था। बिन्देश्वरी ने फिर एक लकड़ी फेंकी और शेर फिर कुछ हिला। पहली बार भी शेर के हिलते ही मैंने बन्दूक चलाना चाहा मगर बिन्देश्वरी ने रोका, दूसरी बार शेर का हिलना था कि मैंने फायर कर दिया। गोली बीचोबीच पीठ पर लगी। शेर जो उलटा-पलटा उससे वह करीब-करीब साफ दिखाई देने लगा और मैंने फिर एक फायर किया मगर साफ बच गया। फिर बन्दूक भरी। फिर फायर किया, वह भी बच गया। कारण कि मेरे पैर अब भी काँप ही रहे थे कुशल यह थी कि पहली गोली उसके पीठ में बीचोबीच लग गई थी और शेर उठने लायक नहीं था। बिन्देश्वरी ने कहा कि शेर अब उठने लायक नहीं है—आप ठीक निशाना मिलाकर बन्दूक चलाइये। तब मैंने बगल के पेड़ के सहारे से बन्दूक चलाई और गोली गर्दन पर जो कि साफ दिख रही थी लगी और शेर मर गया।

वापस होते समय बिन्देश्वरी ने मुझसे अपनी धृष्टता की क्षमा याचना करते हुए जो बातें कीं उसका सारांश यह था कि मुझे फौरन हाँके के बाद घायल शेर ढूँढ़ने के लिए नहीं चल देना चाहिए था। कम से कम शाम को अच्छा होता कि दूसरे रोज। मेरे भाग निकलने पर पकड़ लेने का मुख्य कारण यह था कि मैं सदा के लिए डरपोक बन जाता और शिकारी जीवन ही समाप्त हो जाता। हाँका वालों को तो कभी घायल शेर की खोज में नहीं जाना चाहिए, पकड़ जाने के खतरे के अतिरिक्त यह कठिनाई भी पड़ जाती है कि जंगल में आदमियों के फैले रहने पर खड़खड़ाहट होती रहती है और घायल शेर का पता चलना या उन पर गोली चलाना बहुत ही खतरनाक रहता है कि किसी आदमी को न लग जाये। शेर की दहाड़ ऐसी होती है कि बहुत से लोग बेहोश होकर गिर जाते हैं जिसका घायल शेर द्वारा पकड़ लिया जाना बहुत ही आसान रहता है। बिन्देश्वरी की इस बुद्धिमानी को समझ कर मुझे बड़ी प्रसन्नता हुई।

शिकार के रोचक अनुभव

महाराजा वीरभद्रसिंह

मुझे शिकार के कुछ रोचक अनुभवों का वर्णन करना है। बड़े जंगली जानवरों का शिकार जिसे अंग्रेजी में 'बिग गेम शूटिंग' कहते हैं, का अनुभव मुझे केवल राजस्थान, जहाँ का मैं निवासी हूँ तथा मध्य प्रदेश जहाँ मैं नौकरी कर रहा हूँ, का ही है। इन दोनों राज्यों से सम्बन्धित एक-एक अनुभव आपको सुनाता हूँ—

पहले मुझे राजस्थान की एक रोमांचकारी घटना का स्मरण आता है। यह घटना सन् १९४६ की है। मैं भूतपूर्व डूंगरपुर राज्य का रहने वाला हूँ। यहाँ के महाराजा श्रीमान् महारावल साहब ने राजधानी के पास एक सुरक्षित वन (गेम प्रिजर्व) बनाया था। जिसमें अनेक किस्म के जंगली जानवर काफी संख्या में थे, खासकर साँभर, चीतल और शेर। खेद है कि अब वे नहीं रहे। अब तो वहाँ खरगोश का शिकार भी दुर्लभ है खैर।

शेर की फोटो लीजिए

महाराजा साहब ने दिन के समय शेरों को उनके स्वाभाविक वातावरण में फोटो लेने की एक निराली तरकीब ढूँढ निकाली थी। उन्होंने जंगल में तीन-चार ऐसे सघन स्थानों को चुन रखा था जहाँ पास ही पानी भी हो और शेर दिन के समय भाड़ियों की छाया में आराम भी कर सके। शेर इस स्थान में दिन में भी पड़ा रहे इसके लिए उसकी खुराक का प्रबंध भी आवश्यक था और इसके लिये भैंसा बाँध दिया जाता था। इस क्रिया को शिकार की भाषा में “गारा बाँधना” कहते हैं। गारे से ३० या ४० गज की दूरी पर किसी ऊँचे स्थान पर एक सागवान की बल्लियों का कटघरा बना दिया जाता था ताकि वहाँ से शेर को गारा खाते हुए या पास में बैठे हुए दिन भर देखा जा सके।

इस कटघरे में जाने के लिए ४ फुट चौड़ी और २०० से ३०० गज तक की लम्बी एक गली बनाई जाती थी जो घास के टट्टों से दोनों ओर और ऊपर से भी ढकी हुई होती थी। कटघरा एक छोटे कमरेनुमा था जिसमें ४-५ व्यक्ति बड़ी आसानी से खड़े रह सकते थे। यह चारों ओर से बन्द था। इसमें अंधेरा रहने के कारण बाहर से शेर कटघरे के भीतर के व्यक्तियों को नहीं देख पाता था। केवल भीतर से शेर को देखने तथा फोटो लेने के लिए कुछ छोटे-छोटे छेद (लुप होल) बना दिये गये थे। कटघरे में जाने वाली गली में भी अंधेरा था, परन्तु उतना नहीं जितना कटघरे में।

उस दिन महाराजा साहब के यहाँ कुछ मेहमान आये हुए थे जो शेर देखने के लिए उत्सुक थे। इसलिए ऐसे एक स्थान पर गारा बंधवाया गया तथा एक शिकारी तैनात किया गया कि वह बहुत जल्दी सवेरे कटघरे में जाए और यदि शेर ने गारा कर लिया हो तो आकर खबर दे। दूसरे दिन सवेरे शिकारी ने आकर बताया कि शेर गारे पर है। मेहमानों को ले जाने की जिम्मेदारी मुझे सौंपी गई। हम लोग नियत स्थान से कुछ ही दूर पर मोटर कार से उतर गये। लगभग १०० गज चलने के बाद धीरे से उसी गली में घुसे जो कटघरे में पहुँचती थी। यह गरमी का मौसम था और अप्रैल माह की सुबह। जाते-जाते मुझे दाहिने हाथ घास के टट्टे में एक बड़ा सा छेद दिखाई दिया। मुझे शंका हुई कि क्या कोई बड़ा जंगली जानवर तो टट्टा तोड़ कर गली में नहीं घुस आया है? परन्तु जमीन पर पैर के निशान नहीं मिले।

पाँच गज पर शेर

कुछ ही दूर जाने पर मुझे रास्ते के बीचों बीच जमीन पर एक सफेद चीज दिखाई दी। मैं तुरन्त रुका और मेहमानों को भी रुक जाने के लिए इशारा किया। इतने में यह सफेद चीज उठ खड़ी हुई और उस कम अंधेरे में साफ तौर से दिखाई पड़ा कि वह शेर ही है जो इसी छेद से गली में घुसा था जिसे हम देख कर आगे बढ़े थे। मैंने जो सफेद चीज देखी थी वह उसी शेर का सीना था। इस समय शेर हमारे से केवल ५ गज ही दूर था। मेरे मन में भयानक विचार आया कि यदि शेर उसी छेद में से लौटना चाहे जिससे वह घुसा था तो हम सब लोगों को रास्ते में ही साफ कर देगा। इस समय पर बन्दूक चलाना और भी खतरनाक होता, क्योंकि

एक तो वहाँ अच्छी तरह निशाना ताकने के लिए काफी उजाला नहीं था और दूसरे मेरे पास छोटे बोर की बन्दूक थी। यदि शेर एक ही गोली में नहीं मर सका और केवल घायल ही हुआ तो वह हम में से किसी न किसी को गुस्से में बुरी तरह घायल तो कर ही देगा। भाग्यवश शेर कटघरे की ओर मुड़ कर चला गया और हम लोग अपने आत्म-सम्मान के साथ मैदान छोड़ तुरन्त वापिस हुए तथा मोटर कार के पास पहुँच कर ठंडी साँस ली।

दूसरी घटना मध्य प्रदेश के सागर जिले की है जहाँ मैं सन् १९५६ में डिप्टी कमिश्नर था। नवम्बर मास में एक दिन सागर से १० मील दूर बसौना नाम गाँव से मेरे पास खबर आई कि शेर ने एक काश्तकार का बैल मार डाला है। मैं मौके पर पहुँचा। वहाँ कोई उपयुक्त पेड़ नहीं था जिस पर मचान बनाकर रात में बैठा जा सके। परन्तु गाँव वाले जिनके जानवर शेर कुछ समय से खा जाया करता था, जोर देते रहे कि हाँका लगाने की व्यवस्था की जाए। तुरन्त हाँका का क्षेत्र तय किया गया और जहाँ शेर ने बैल मारा था उस स्थान से ६०० गज की दूरी पर एक नाले के किनारे मचान बाँधा गया।

जान लेवा हाँका

हाँका, जहाँ गारा पड़ा था उस स्थान से शुरू होकर मचान की ओर आना था क्योंकि ऐसी आशा थी कि गारा और मचान के बीच किसी झाड़ी में शेर पड़ा होगा। मेरे मचान पर चढ़ने के बाद अभी हाँका शुरू भी नहीं हो पाया था कि मचान के पीछे की ओर से नाले को पार करते हुए शेर दिखाई दिया। वह हाँका वाले क्षेत्र में प्रवेश कर रहा था। यह सौभाग्य की बात थी यदि उस समय शेर हाँके के क्षेत्र में नहीं आया होता तो हाँका शुरू हो गया होता और हाथ कुछ भी नहीं आता, क्योंकि शेर तो मेरे पीछे की ओर था न कि हाँका वाले क्षेत्र में। मेरा अनुमान था कि शेर जिस नाले को पार कर हाँके के घेरे में गया है वहाँ से लौटेगा।

पाँच मिनट के बाद हाँका शुरू हुआ और आदमियों के हाँका लगाने की आवाज सुनने के कुछ ही मिनट बाद मैंने शेर को उसी स्थान से होकर लौटते देखा जिस स्थान से वह कुछ ही समय पहले हाँके के घेरे में घुसा था। वह नीचे नाले में पहुँच कर चट्टान पर खड़ा हो गया वहाँ से कूद कर या तैर कर नाला पार करना चाहता था कि मैंने गोलियाँ चला दीं और शेर लड़खड़ा कर पानी में गिर गया। परन्तु वह किसी प्रकार तैर कर पास ही जंगल में करोंदा की घनी झाड़ियों में ओझल हो गया। जब हाँका डालने वाले व्यक्ति मचान के पास आये तब मैं नीचे उतरा। शेर को गोली लगी है या नहीं यह निश्चित करने के लिए मैं नाले की उस चट्टान पर गया जहाँ शेर गोली चलने पर पानी में गिरा था। उस समय सूर्यास्त हो चुका था। इस लिए मैंने यह निश्चित करने के बाद कि उसे गोली लगी या नहीं, अगले दिन शेर को ढूँढने का तय कर लिया था। मेरे साथ डिप्टी कलेक्टर बकाउल्ला भी थे। उनके पास ४०५ बोर की राइफल थी। केवल हम दोनों के पास ही बन्दूकें थीं। हम उस चट्टान पर गये जहाँ से मैंने शेर को पानी में गिरते देखा था। वहाँ खून के निशान नहीं होने के कारण मैंने जो पास में लोग खड़े थे उनमें से दो-तीन को बुलाया और नाले के उस पार जाकर खून देखने को कहा। उनमें से दो व्यक्ति तुरन्त तैयार हो गये जिन्हें २० से ३० फुट की दूरी पर कमर तक गहरे पानी में होते हुये नाला पार

कर सामने के किनारे पर खून के निशान देखना था। यह काम मुझे ही करना चाहिए था लेकिन उस रोज कड़ी ठंड होने से कमर तक गहरे ठंडे पानी में उतरने का साहस नहीं हुआ।

शेर और बिहारी पानी में

अस्तु, जो दो व्यक्ति तैयार हुए थे वे पानी में उतरे और ५ गज भी नहीं जाने पाये थे कि सामने किनारे से करोंदा की झाड़ियों में से शेर जहाँ वह तैरने के बाद छिप गया था झपटकर डकारता और दहाड़ता हुआ निकला और पानी में कूदकर पानी में खड़े दो व्यक्तियों में से एक की ओर लपका। इस समय गोली चलाना असम्भव था क्योंकि गलती से गोली आदमी को भी लग सकती थी और दूसरे शेर के पानी में कूदने से, पानी उछलने से शेर साफ-साफ दिखाई भी नहीं दे रहा था। शेर को अपनी ओर झपटते देखकर उस आदमी ने जिसका नाम बिहारी था हम लोगों की ओर भागने की कोशिश की। वह पानी में ही ठोकर लगने से हम से करीब १० फुट की दूरी पर गिर पड़ा। पलक भर में शेर उस पर आ गया और पानी के ऊपर दिख रहे उसके सिर को पकड़ना चाहा। इतने में बिहारी ने पानी में गोता लगा लिया शेर ने भी बिहारी का सर पकड़ने को पानी में सिर डाला परन्तु पानी में सांस न ले सकने से शेर ने तुरन्त अपना सिर बाहर निकाला और जोरों से झटकारा। यही अवसर हमें गोली चलाने को मिला। मैंने और बकाउल्ला ने शेर पर बन्दूकें दागी और उसे वहीं मार दिया।

कछु नहीं भयो

यह सब सेकिडों में हो गया। करीब एक सेकिड के बाद बिहारी पानी में से उसी स्थान से घबराया हुआ निकला जिस स्थान पर मरा हुआ शेर डूब रहा था। हम लोगों ने सन्तोष की सांस ली। जब बिहारी से पूछा कि चोट तो नहीं लगी तो उसने कहा 'कछु नहीं भयो'। मुझे विश्वास नहीं हुआ और जब उसे देखा तो उसकी गर्दन के नीचे एक खरोंच का निशान था जिससे खून नहीं निकला था। और उसके बायें कान की लोर चिर गई थी। इससे यह स्पष्ट हो गया कि शेर ने बिहारी का सिर पकड़ना चाहा था और यह साधारण घाव उसके दाँतों से लगे थे। परन्तु सिर पकड़ में आने से पहले ही उसे तुरन्त अपना सिर पानी के ऊपर निकालना पड़ा। इसी से बिहारी बच गया। कहीं यह घटना जमीन पर हुई होती तो बिहारी तो निश्चय ही मर गया होता। उसके इस तरह अचानक मौत के मुंह से निकल आने पर मैंने ईश्वर को धन्यवाद दिया।

मैं बिना हिचकिचाहट के स्वीकार करता हूँ कि जब शेर ने डकार कर बिहारी पर हमला किया, उस समय मुझे भय अनुभव हुआ। भारी सिर, फटा हुआ बड़े दाँतों वाला मुंह और भयंकर डकारने और हुंकारने की आवाज के साथ तीव्र गति से लपकते हुए शेर का दृश्य बहादुरों के दिलों को भी विचलित कर सकता है।

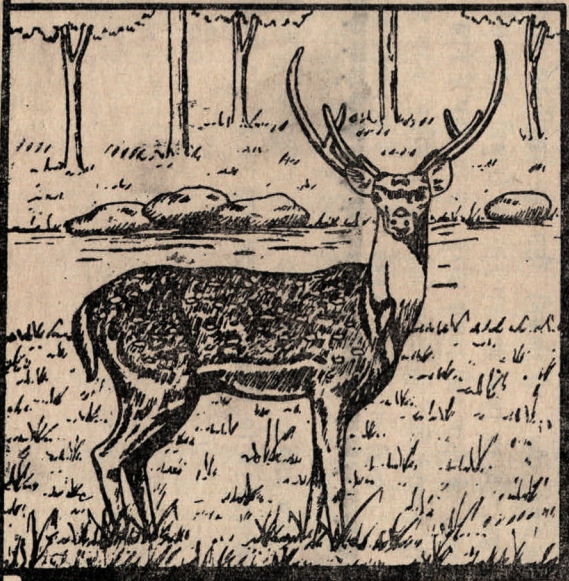
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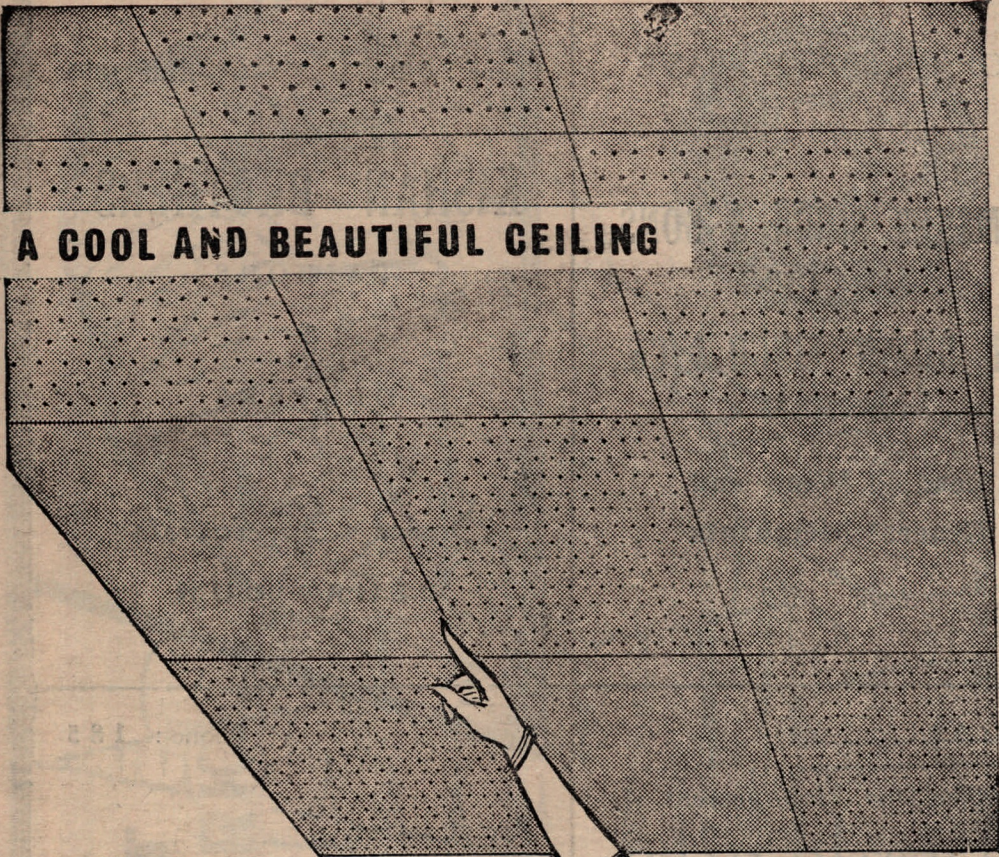
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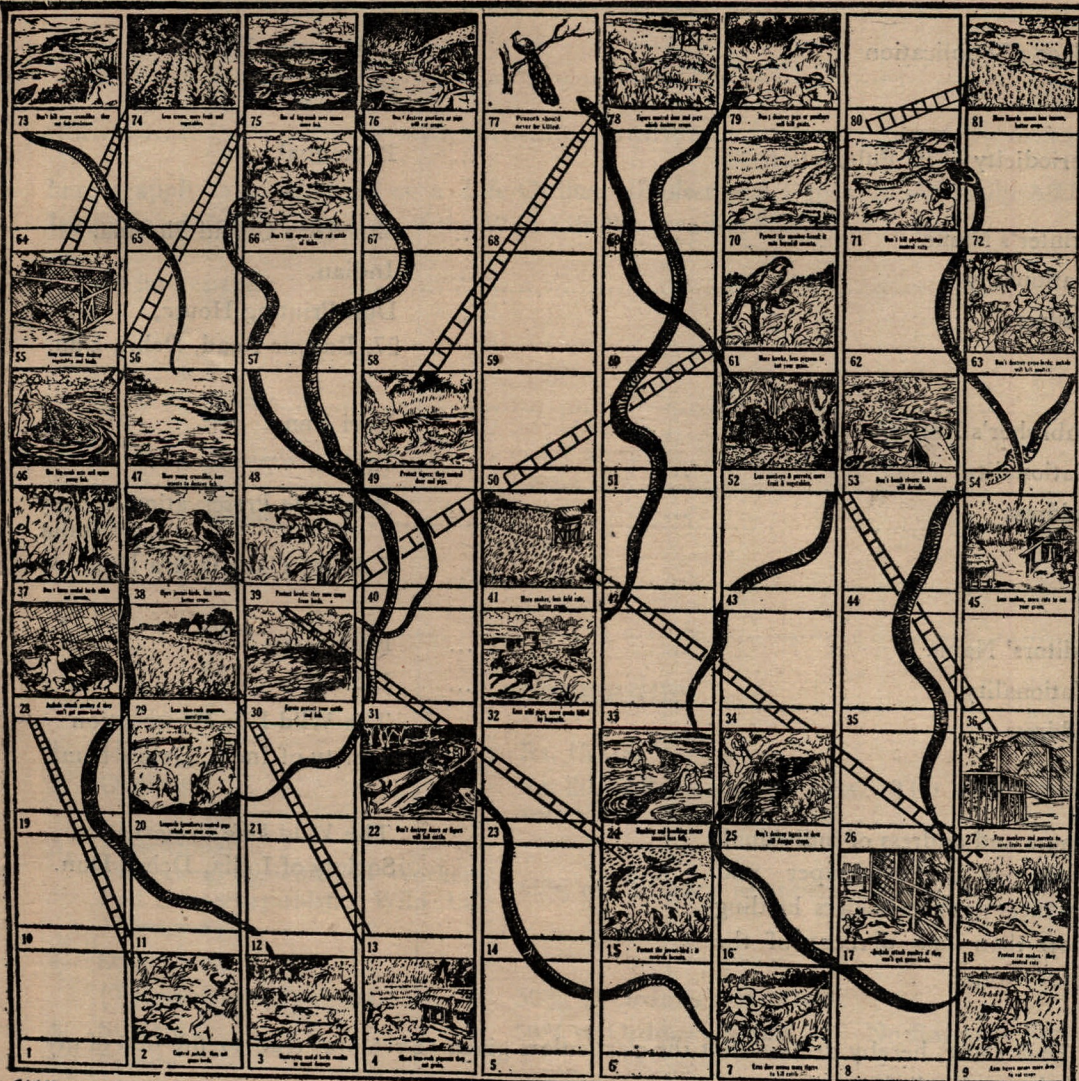
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(b) To assist in enforcing the game and arms rules and to bring to the notice of the authorities any infringements of the same.

(c) To advise and help Government and the District authorities in the formation, maintenance and protection of Sanctuaries and National Parks.

(d) To raise funds for the carrying out of the above aims and objects.

(e) To carry on any other activities which will serve the above objects, including publicity and propaganda and the issue of a journal.

(f) To assist members of the Society in obtaining shooting and fishing licences and facilities for viewing and photographing wild life etc.

(g) To conduct research into the problem of wild life management in India, and in pursuance of this, to initiate, encourage and, where possible, assist in projects for the study of threatened species and related subjects and to provide reference and research facilities for such work.

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